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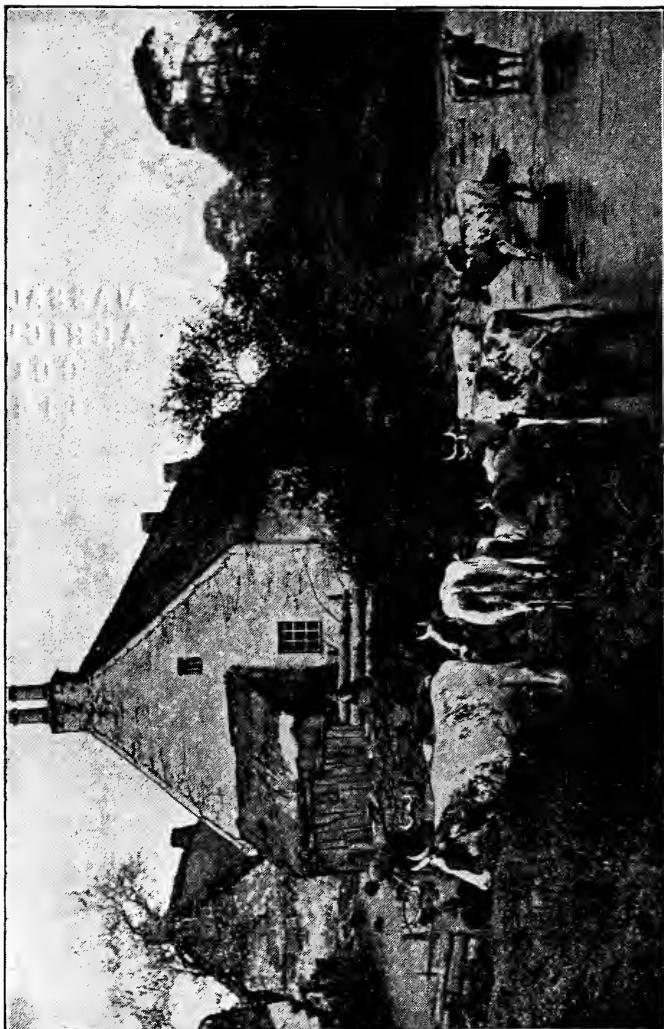
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AYRSIRES IN SCOTLAND.  
FROM BIGGLE COW BOOK. PUBLISHED BY WILMER ATKINSON CO.

# YEAR BOOK

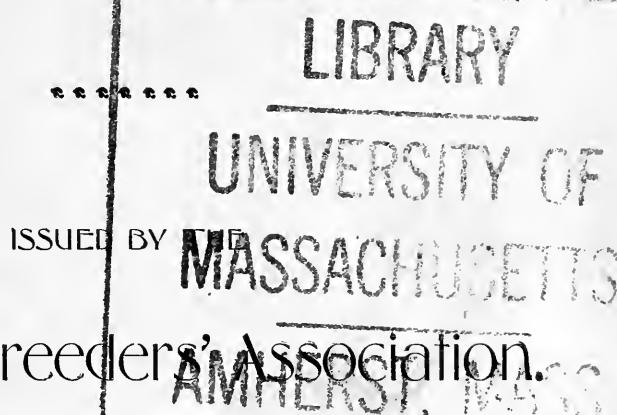
...of the...

# Ayrshire Breeders

...for...

MASSACHUSETTS  
AGRICULTURAL  
EXHIBITION  
1899

1899



BRANDON, V.T.:

BRANDON PUBLISHING COMPANY,

1899.

636.22

Ay7a 1899  
PROCEEDINGS.

The twenty-fourth Annual Meeting of the Ayrshire Breeders' Association was held February 1, 1899, in the Parlor of the Fifth Avenue Hotel, New York, in response to notice of the Secretary, and was called to order by the President, L. S. Drew, at 2 p. m.

There were present about twenty-five including members and others.

MEMBERS PRESENT.

Brown, Obadiah	Casterline, J. Andrew
Doe, Charles C.	Drew, L. S.
Ennis, Alfred A.	French, J. D. W.
Krebs, J. DeWitt.	Lindsay, William
Magie, J. O.	Sears, B. C.
Shimer, B. Luther	Smith, Henry E.
Turnbull, Thomas Jr.	Viner, William
Wells, S. M.	Winslow, C. M.

MEMBERS REPRESENTED BY PROXY.

Arnold, George W.	Ayer, H. S.
Babcock, F. M.	Bacon, P. K.
Beiment, George	Betts, Henry
Blodgett, H. W.	Bowker, George H.
Bowen, Edward S.	Boynton, C. H.
Butterfield, Jerome F.	Byrne, Christopher
Cass, George L.	Cloud, James & Son,
Converse, J. F.	Cookingham, H. W.
Cornell, F. P.	Crosier, William
Curtis, L. W.	Drummond, James
Farrell, W. E.	Fletcher, Etna J.
Fletcher, Geo. A.	Foss, J. M.
Garvin, W. R.	Gold, T. S.
Harrington, H. A.	Hayes, Charles H.
Hazard, Isaac	Hinson, W. G.

Hopkins, Willis W.	Jackson, Ward R.
Joslin, H. S.	Larned, J. H.
Mason, F. H.	McCrea, Robert
Norton, W. H.	Ormiston Bros.
Pierce, Geo. H.	Scribner, G. S.
Sherman, Everett B.	Smith, E. A.
Smith, Oliver	Smith, Peter D.
Spaulding, L. C.	Stevens, Wm. Stanford
Stewart, John	Stowell, L. D.
Surget, James	Thorp, Henry
Tubbs, Ambie S.	Yeaton, George H.
Wells, Dudley	Young, James L.

#### REPORT OF THE SECRETARY.

The membership of the Association has been increased during the past year by the addition of nine members, as follows:

C. H. Boynton, Lisbon, N. H.  
Fisher & May, St. Albans Hill, Vt., and Potsdam,  
N. Y.

Edward S. Bowen, Providence, R. I.  
Charles C. Doe, South Newbury, Vt.  
George W. Knowlton, West Upton, Mass.  
Thomas Turnbull Jr., Monaca, Pa.  
Charles D. Sage, West Brookfield, Mass.  
Geo. H. McFadden, Rosemont, Pa.  
J. H. Griffin, Moira, N. Y.

The deaths of the following members have been reported:

M. L. Conger, Collins Center, N. Y.  
John Dimon, Hartford, Conn.  
William Rodden, Plantagenet, Ont.  
E. Lewis Sturtevant, South Framingham, Mass.

The general interest in Ayrshire cattle seems to be on the increase judging from the increased entries in the Herd Book and letters of inquiry for information in regard to the breed.

The entries to Volume XI were 322 more than to Volume X, and the entries to Volume XII were 656 more than to Volume XI, showing a steady increase during the last four years. A part of this increase however is in consequence of recording ancestors to stock brought out from Canada.

There has been less complaint this past year from buyers of Canada stock in bringing out stock that was not eligible to record in the Ayrshire Record, for the reason that buyers were more careful and as a rule did not move their purchases until they were recorded. Some that did not wait for their cattle to be recorded before starting, found they had bought stock that was not eligible and had to pay duty. In some instances they found they had bought stock that had been thrown out from the Canada Herd Books, and was not eligible to record in any Herd Book at the present time.

The Canadians have amalgamated the two Provincial Herd Books and I understand they are hereafter to record only such as trace to importation.

There appears to be a good demand for Ayrshires in all parts of the country, and an unusual demand for bulls to cross on native and Jersey stock and of late, on the Holstein. The trend of public demand is more and more for just the kind of cow the Ayrshire Breeders are producing.

For some time there has been a letting-go of the Holstein cattle among the milk producers for the Boston milk supply and the following, clipped from the *Country Gentleman* of last week's issue, shows the feeling in the state of New York:—

#### **The Holsteins Threatened.**

---

Eds. COUNTRY GENTLEMAN—Unless the friends and breeders of Holstein cattle interpose some satisfactory objection, this meritorious breed will soon be eliminated from the herds of milk producers, wherever

the New York Condensed Milk Company has a factory.

This company has declared Holsteins to be deficient in butter fats, and is determined to weed them out of their herds. Any milk producer whose herd is composed largely of these cows is certain to be crossed from its list in the near future. This decision has not been reached hastily. For several years there has been the low rumble of discontent, with an occasional note of individual warning. Within three months a number of herds of large milking Holsteins have been thrown out of the Brewster factory, without preliminary notice, and their owners have had to seek a market in New York city. In the face of numberless tests inaugurated by the breeders, showing large and satisfactory secretions of butter fats, the milk producers are aggrieved at the arbitrary action taken; and are also led to doubt the sincerity of the company's discrimination.

But after due consideration, the doubt is bound to shift to the breeders and testers, and they will need to bestir themselves to prevent the substitution of thousands from other breeds where the Holsteins are now established. How the breeders shall act is for their determination, although they are certain to have the aid and sympathy of the milk producers. Let it be understood that the State test and factory test are not, or may not be, the same. The company is not bound by any statutory test, having a test suited to its own idea of what the standard should be.

It might be wise for the breeders to visit each factory and examine the tests there made of Holstein herds. In that way they will be able to ascertain the standard to which they must bring their breed, or yield to the inevitable in having their "dreams in black and white" swept from a thousand fields in this State alone.

The action of the New York Condensed Milk Company is likely to be followed by other milk companies, for this company sets the pace, and the Holsteins will

be relegated to the shambles, or to the beef sections of the West, where they will be outclassed by breeds already on the ground.

#### BROOK FARM.

The day of selling water in the name of cow's milk has passed, and with it is passing the Holstein.

The Jersey cow is still the pet of the rich, and her owners still delights to visit her in frescoed barns or see her tethered on his luxuriant lawn, but the rank and file of the dairymen are growing more and more tired of the tender Jersey and are looking for a cow of more substance, that will give a good return for fair keep and moderate care, and they are turning towards the Ayrshire breeders for bulls to cross on the unregistered and grade Channel Island cows.

I was invited to attend the annual meeting of the Illinois Live Stock Breeders' Association held in Springfield last November to present the Ayrshire cow, which I did, and I was interested to see the eagerness to learn something of the breed, and the favorable remarks about her. It was very evident the public wanted some cow other than the Holstein or Jersey.

I have written a number of short descriptive articles on the Ayrshire cow for Western papers which I have sent with a cut of a cow, and have received many letters of inquiry to which I have sent our Year Book and such literature as we have had in the office. I think our plan of issuing a Year Book in an attractive form, with cuts of representative Ayrshires, and a history of the breed with information of their dairy quality and such general information as the inquiring public want, is of great benefit to the general interest of the breed.

If we could only obtain more, and new information about the dairy quality of the Ayrshire cow, it would greatly help in spreading the knowledge of this useful cow. But breeders seem unwilling to test their cows

themselves or allow the Association to do it. The few herds we have tested strongly indicate that individual cows might be selected which are phenomenal in their yield of milk and butter. I believe the efforts of a few of the breeders in this direction for the past several years, have done much to popularize the breed.

The United States is the only place where the leading Ayrshire breeders give prominence to utility as a dairy cow. In Scotland, in Canada, and to some extent in the States, the decision at our leading fairs is more for a typical show cow than for any dairy quality the Ayrshire may have. It is said that in Scotland the prize goes to the cow who has the most queenly way of walking and holds her head the highest, all of which is very well if you can have the milk and the butter to go with it, but non-essential points have injured many a good breed in encouraging the selection and building up of those characteristics in a dairy breed which are antagonistic to dairy excellence.

## TREASURER'S

HENRY E. SMITH, IN ACCOUNT WITH THE

1898.			
Jan. 1.	Cash in Treasurer's hands.....	\$ 157 08	
" 1.	Deposit in Citizens' Savings Bank, Providence, R. I.,.....	1,927 68	
" 1.	Deposit in Smithfield Savings Bank, Greenville, R. I.,.....	600 39	
	Sales of Herd-books.....	48 75	
1899.			
Feb. 1.	Interest on Deposit.....	103 25	
1898.			
	Entries and Transfers as per Secretary's acc't		
	Milk Record Blanks      "      "      "	1,240 08	
	Herd Books sold      "      "      "	1 88	
	9 Life Membership Fees      "      "      "	12 50	
		225 00	
			\$4,316 61

# REPORT.

## AYRSHIRE BREEDERS' ASSOCIATION.

1898.			
Jan. 26.	Expenses to Annual Meeting.....	\$ 19 30	
	Postage.....	3 59	
	Paper and twine.....	50	
June 1.	Insurance on Herd Books.....	15 00	
1898.	As per Secretary's account:—		
	Paid N. Y. Ex. Station for testing L. D. Stowell's herd for 1897, and Home Dairy test made January, 1898.....	10 45	
	Miss Bigelow, stenographer.....	20 35	
	Prof. Van Slyke, for lecture.....	48 00	
	Plates for 1898 Herd books.....	18 26	
	Seal for A. B. Association.....	4 00	
	Vermont State fair Butter-fat test.....	25 00	
	Home Dairy test made July 5, 1898.....	13 65	
	Union Printing Co's bill.....	164 65	
	Secretary's salary.....	400 00	
	Secretary's traveling expenses.....	98 20	
	Sundries, as per bill, including postage, express, telephoning, etc.....	54 15	
	Balance on hand.....	3,421 51	
1899.			
Jan. 1.	Deposit in Smithfield Savings Bank, Greenville, R. I..... (The Citizens' Savings Bank deposit having been transferred to it.)	\$4,316 61	
	Cash in Treasurer's hands.....	\$2,631 32	
		790 19	
		\$3,421 51	

HENRY E. SMITH, Treasurer.

This is to certify that we have this day examined this account of the Treasurer of the Ayrshire Breeders' Association for 1898, and find all correct, with proper vouchers.

February 1, 1899.

J. O. MAGIE.  
S. W. WELLS.

## HOME DAIRY TEST.

TO THE AYRSHIRE BREEDERS' ASSOCIATION.

Gentlemen:—Your committee on Home Dairy Tests for 1898 would submit the following report.

Soon after the Annual meeting of 1898, we issued the following circular:

AYRSHIRE BREEDERS' ASSOCIATION.

HOME DAIRY TEST, 1898.

The officers of the Ayrshire Breeders' Association have for several years made many and varied offers and inducements to owners of Ayrshire cows to furnish reliable statistics of the dairy yield of their cows, and find it very difficult to obtain them. The efforts of a few of the owners have revealed the fact that the Ayrshire cow has an undeveloped dairy capacity that if judiciously cultivated by breeding and selection would undoubtedly place her in the front rank as a producer of both milk and butter.

The Association, for the purpose of making a still further attempt to obtain statistics, voted at its last annual meeting to authorize the "Dairy Committee" to conduct a Home Dairy test for seven consecutive days to obtain a week's record of quantity of milk, per cent. butter fat, per cent. total solids, and pounds of marketable butter for herds of five or more cows, to be reported singly and as a herd.

### RULES OF TEST.

Herds of five or more cows will be tested for the herd average and the individual records.

Any breeder of Ayrshires may enter a herd of five or more cows, which shall at the time of entry stand on the books of the Association as owned by him. He shall, in making the entry, fill out a blank furnished by the Secretary, giving name and number of each cow, her age and weight, the number of calves she had pro-

duced, the date of birth of last calf, and date of last service by bull since last calf was dropped. A statement, as accurate as possible, is requested of the method of feeding and care for at least two weeks previous to test, and during the test the kind and quantity of food consumed by the cows will be ascertained and recorded.

The time of having the test made is optional with the owner, but notice must be given the Secretary at least one month previous that arrangements may be made for the test.

The owner need not name the cows entered for the test until after the test is made, and may have as many of his cows tested as he chooses.

The tests will be made as far as possible by agents from the Experiment Stations, or some other disinterested and competent persons, who will see the cows milked clean twelve hours previous to the beginning of the test, and will weigh and test the milk of each cow at each milking during the test, or he may test from a composite sample, being left optional and governed by the necessities of the case, but if he shall make a composite sample he shall place a seal on each jar of milk after adding to it. The test shall be made by the "Babcock Tester" and the "Quevenne Lactometer," and the quantity of marketable butter shall be calculated by the addition of one-sixth to the butter fat.

It will be expected that persons entering herds for the Home Dairy Test will entertain the agent while making the test, free of charge, and give him every facility for carrying on the test.

C. M. WINSLOW, Sec'y, Brandon, Vt.

J. D. W. FRENCH, No. Andover, Mass.,

COMMITTEE ON DAIRY TESTS.

THE SECRETARY—In figuring the amount of butter from the butter fat obtained by use of the Babcock test, you will notice it is on the basis of an addition of one-sixth. We adopted this as it is the standard set by the

Experiment Stations of the United States. I understand the Holstein men figure theirs by the addition of one-fourth, while the private herd tests of the Jerseys are at one-fifth. We preferred to figure the Ayrshire by the most approved method, for while it does not give as much as the impossible method of the Holstein or the doubtful method of the Jersey, it does give an amount that is true and can be obtained by an ordinarily careful method of handling the milk and cream.

This morning the Executive Committee voted to recommend to the Association that we continue these tests with the appropriation of an amount not to exceed \$300 to pay for expenses, and voted in addition that in the butter fat test the exact amount of the cost of the feed used, with a fair allowance for the pasture given, and that the report contain the cost per pound of the butter produced; and also voted to recommend to the Association, as an inducement to breeders to test their cows, an appropriation of \$100 in prizes, \$50 for the first, \$30 for the second, and \$20 for the third.

MR. FRENCH—I move that the report be accepted and the recommendation adopted.

Motion seconded and carried.

MR. SEARS—I think we ought to provide for the Committee. I move that the same Committee, consisting of Mr. Winslow and Mr. French, be continued.

MR. MAGIE—Second the motion.

Carried, with no opposition.

The following herds were entered and tested in accordance with the above rules and the result is here-with given in detail:

#### CHARLES C. DOE.

I wish to enter the following herd of 5 cows, for the "Home Dairy Test" by the Ayrshire Breeders' Association.

Name.	No.	Age	Weight	No. of calves.	Date of birth	No. of last calf.	Date of last bull service since calving
Norna of Brookside	13004	4	975	3	Mch. 20, '98.	Apr. 12, '98.	
Rose Lonsdale,	12780	3	975	1	Sept. 4, '97.	Oct. 30, '97.	
Rose Lastrea,	12786	3	975	1	Sept. 11, '97.	Nov. 29, '97.	
Fanny Carston,	12772	3	1150	2	May 3, '98.	June 15, '98.	
Katie Lorne,	12792	2	850	1	Jan. 4, '98.	Apr. 22, '98.	

## GENERAL METHOD OF FOOD AND CARE.

In winter hay, ensilage once a day, bran and gluten meal twice a day. In summer, pasture and 2 lbs. bran; stabled nightly. During test, Nos. 1, 2, 3 and 5, 2 lbs. bran 1 lb. gluten; No. 4, 4 lbs. bran, 2 lbs. gluten, in two feeds and pasture.

(Signed) CHARLES C. DOE.

SOUTH NEWBURY, July 29, 1898.

Test made under the direction of the Vermont Experiment Station and conducted by P. S. Spaulding, June 22-28.

Name	Milk.	Per cent. total solids.	Per cent. fat.	Lbs. fat.	Lbs. butter.
Norna of Brookside,	189.	12.61	3.74	7.07	8.25
Rose Lonsdale,	122.	12.97	3.91	4.77	5.57
Rose Lastrea.	109.5	13.59	4.37	4.78	5.58
Fanny Carston.	328.5	12.14	3.08	10.12	11.81
Katie Lorne,	170.	12.70	3.68	6.26	7.30
	919.	12.80	3.78	33.00	38.51
Average,	184.	12.80	3.78	6.6	7.75

The Secretary—While this test as a whole is not large in its result, it should be remembered that the cows are all young and that most of them are to calve soon.

## L. S. DREW.

I wish to enter the following herd of 5 cows, for the "Home Dairy Test" by the Ayrshire Breeders' Association.

Name.	No.	Age.	No. of Calves.	Date of birth of last calf.	Date of last bull ser- vice since calving.
Sadie Tascott,	11483	7	5	May 8, '98.	
Miss Edna,	13218	3	2	May 14, '98.	
Miss Nellie 2d,	12642	5	3	May 15, '98.	
Hazel B,	10721	9	7	Mch. 18, '98.	
Roanette,	11476	7	5	April 1, '98.	May 26, 1898.

## GENERAL METHOD OF FOOD AND CARE.

Pasture, no grain.

(Signed) L. S. DREW.

SOUTH BURLINGTON, Aug. 15, 1898.

Test made June 5-11, 1898, by Vermont Agricultural Experiment Station.

Name.	Milk.	Per cent. total solids.	Per cent. fat.	Total fat.	Total butter.
Sadie Tascott,	269.25	11.97	3.13	8.44	9.85
Miss Edna,	238.25	12.49	3.61	8.70	10.03
Miss Nellie 2nd,	279.50	12.70	3.63	10.14	11.83
Hazel B,	257.50	12.43	3.53	9.08	10.59
Roanette,	248.75	12.38	3.53	8.79	10.25
	1293.25	12.39	3.49	45.15	52.55
Average	258.65	12.39	3.49	9.03	10.50

## CHARLES H. HAYES &amp; SONS.

We wish to enter the following herd of 8 cows, for the "Home Dairy Test" by the Ayrshire Breeders' Association.

Name.	No.	Age	Weight	No of calves.	Date of birth of last calf.	Date of last bull servic since calving
Diannalynne,	11109	9	1300	7	April 27.	July.
Lady Murcia,	11111	8	1200	5	Feb. 23.	July.
Hessa,	11924	5	800	4	May 5.	Aug. 9.
Cremation,	12768	4	1200	3	April 3.	Sold June 9, not served then.
Cherry Blossom,	12389	4	1100	3	March 20,	June.
Dot Cadmus,	11205	8	900	7	April 10.	September.
Morrocco,	13462	9	1300	8	Nov. 29, '97.	Jan. 27, '98.
Drusa,	11929	7	900	6	April 4.	May 28.

## GENERAL METHOD OF FOOD AND CARE.

Cows have all the feed that is required. Pasture is poor, supplemented with grain in summer. Winter feed, hay, oat feed, ensilage, brewers' grains, fine feed and gluten, mixed.

(Signed) CHARLES H. HAYES & SONS.

PORTSMOUTH, N. H., January 17, 1899.

Test made by C. D. Howard, for N. H. Experiment Station, May 24-30, 1898.

Name.	Milk.	Per cent. total solids.	Per cent. fat.	Lbs. fat.	Plus 1-6 for lbs. butter.
Diannalynne,	300.	12.45	3.55	10.66	12.44
Lady Murcia,	286.	12.77	3.60	10.24	11.94
Hessa,	219.	13.37	4.07	8.89	10.34
Cremation,	220.	13.12	3.93	8.61	10.05
Cherry Blossom,	211.	12.65	3.75	7.89	9.20
Dot Cadmus,	199.	12.58	3.84	7.65	8.93
Morrocco,	186.5	12.88	4.01	7.65	8.93
Drusa,	201.5	12.61	3.61	7.26	8.47
	1823.	12.80	3.80	68.85	80.30
Average,	228.	12.80	3.80	8.61	10.25

## GEORGE H. YEATON.

I wish to enter the following herd of 8 cows, for the "Home Dairy Test" by the Ayrshire Breeders' Association.

Name.	No.	Age	Weight	Guess	No of calves.	Date of birth of last calf.	Date of last bull service since calving
Lady Fox,	9669	11	960	9	Jan. 4, '98.		
Biona,	12351	5	950	3	Dec. 6, '97.	Jan. 20, '98.	
Lady Crescent,	11880	5	950	3	Oct. 18, '97.	About	Dec. 15, '97.
Meewe,	11130	7	975	4	May 25, '97.	Dec. 22, '97.	
Clem,	11135	7	975	5	Apr. 4, '98.		
Xoa,	11469	6	975	3	Feb. 7, '98.	Mar. 28, '98.	
Ouija,	11882	5	990	2	Feb. 16, '98.		
Olah,	11470	6	960	3	Jan. 30, '98.	Mar. 7, '98.	

## GENERAL METHOD OF FOOD AND CARE.

Fed ensilage twice each day with what good hay they would eat once a day. Grain ration was mostly wheat-bran with a mixture of cotton seed, gluten and ground oats in about equal parts twice a day. Very cold water for drink.

(Signed) GEORGE H. YEATON.

DOVER, N. H., April 21, 1898.

Tested by C. W. Vickery for New Hampshire Experiment Station, April 14-20, 1898.

Name.	Milk.	Per cent. total solids.	Per cent. fat.	Total fat.	Plus 1-6 for lbs butter.
Lady Fox,	331	13.12	4.17	13.78	16.08
Biona,	275 9	12.40	3.48	9.60	11.20
Lady Crescent,	220 3	13.69	4.37	9.60	11.20
Meewe,	205 9	13.58	4.35	8.95	10.45
Clem,	238.7	14.25	5.20	12.12	14.14
Xoa,	314.9	12.50	3.76	11.81	13.78
Ouija,	269.6	12.40	3.42	9.31	10.86
Olah,	310.5	12.22	3.53	10.88	12.69
	2168.8	13.02	4.03	86.05	100.40
Average,	258.6	13.02	4.03	10.76	12.50

## REPORT OF THE COMMITTEE ON FAIR-GROUND TESTS.

In accordance with the instructions of the Association at its last Annual Meeting your committee prepared the following circular:

SECRETARY'S OFFICE,  
AYRSHIRE BREEDERS' ASSOCIATION.

BRANDON, Vt., February 1, 1898.

The Ayrshire Breeders' Association offers a special premium, for the season of 1898, of \$25.00—\$15.00 to first and \$10.00 to second—to the two Ayrshire cows, registered in the Ayrshire Record, that shall score the highest from one day's milking on your Fair Ground at the time of holding your Fair, the butter fat not to fall below 3.70 per cent. butter fat as determined by the Babcock test and the award to be decided by the following

## SCALE OF POINTS :

For each 20 days since calving,	- - - - -	1 point
"    15 days of gestation,	- - - - -	1 "
"    pound of milk in 24 hours,	- - - - -	1 "
"    "    butter fat in 24 hours,	- - - - -	20 points

Provided, however, that your Fair Association will offer a like amount, making the whole premium offered amount to \$30.00 to first and \$20.00 to second, and that your Fair Association take the full charge of the testing, and report the result to the Secretary of the Ayrshire Breeders' Association.

C. M. WINSLOW, Secretary.

On March 5th a copy of the above circular was mailed to -

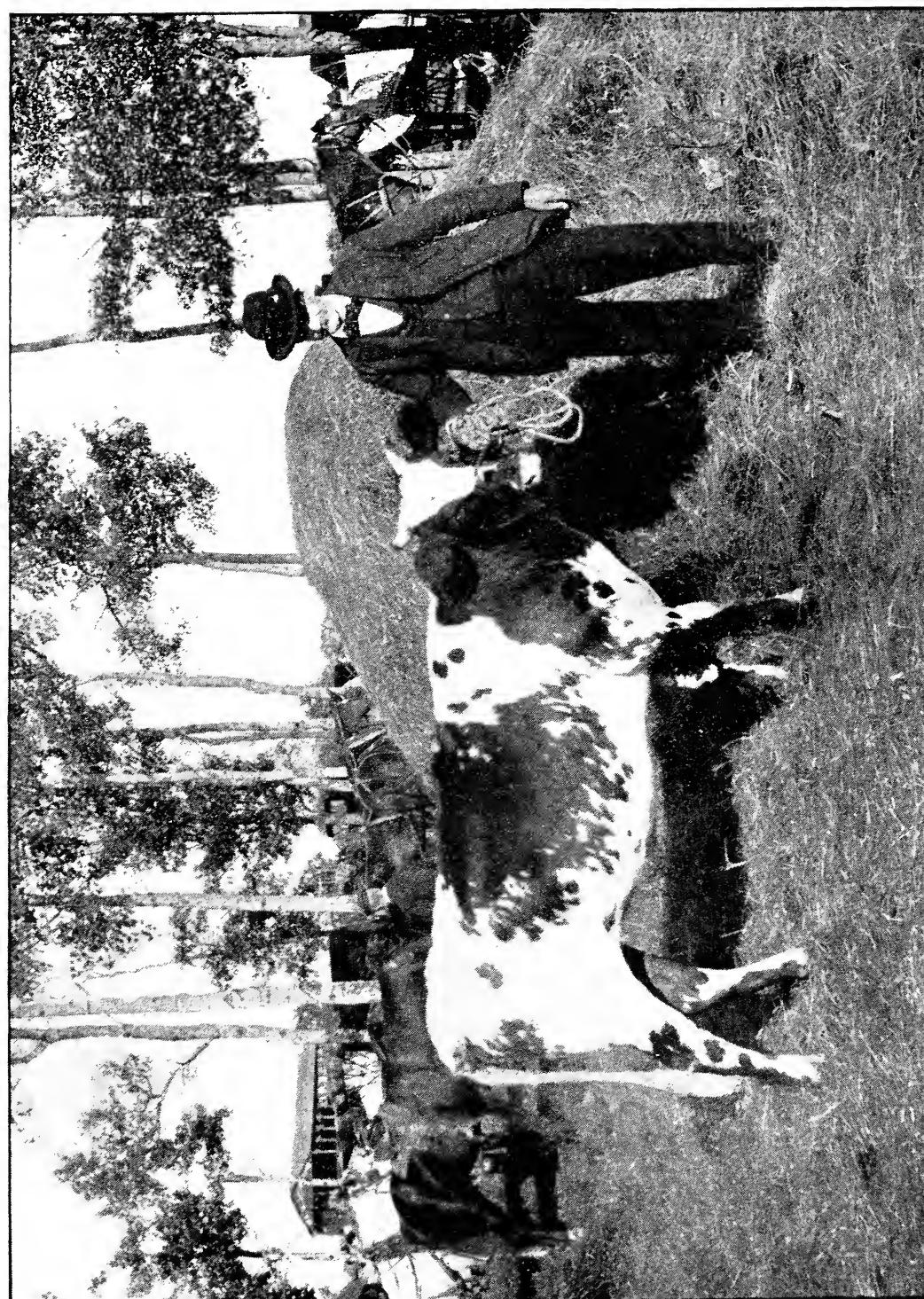
Illinois State Fair, Springfield, Ill.  
 Maine State Fair, Lewiston, Me.  
 New England Fair, Portland, Me.  
 New Hampshire Grange Fair, Tilton, N. H.  
 New Jersey State Fair, Waverley, N. J.  
 New York State Fair, Syracuse, N. Y.  
 Ohio State Fair, Columbus, O.  
 Pennsylvania State Fair, Johnstown, Penn.  
 Rhode Island State Fair, Cranston, R. I.  
 St. Louis Fair, St. Louis, Mo.  
 Vermont State Fair, White River Junction, Vt.

The New England Fair and Vermont State Fair accepted the above offer and so stated in their Premium List. Cows were duly entered and tests made at both the above Fairs but your Secretary has not received the report of the New England Fair test. The Vermont State Fair reported five cows entered by C. M. Winslow & Son, Brandon, Vt., and the result of the test was as follows :

Name.	Lbs. milk.	Per cent. fat.	Total fat.
Rose Erica,	27	5.2	1.40
Rose Deruth,	28	4.5	1.25
Rose Colbv,	24	4.9	1.17
Rose Elenore,	18	4.5	.82
Rose Carentine,	20	4.	.80



MYRTLE DELL. 3854.



MISS GURTA 14153

Giving Rose Erica 1st premium, Rose Deruth 2d premium.

Your Executive Committee voted to recommend to the Association the continuance of these tests, deeming that for the amount of money expended it gave the Association valuable statistics and encouraged a high percentage of butter fat. I would say here, that the expenses of the Association for the Fair Ground Tests for these Fairs was \$25.

MR. FRENCH—I move that the prize for the Fair Ground Tests be continued. It seems most important to continue that, though comparatively few of the Fair Associations accepted the offer we made. It is a good plan to say to the Fair Associations of the country, you ought to encourage the people and the farmers not only to show stock for points but to show stock for their merits and for what they do. As they say "Handsome is as handsome does," and I think I would continue that prize if not a single Fair Association accepted, simply because I believe it is holding up the standard of what we ought to do and what ought to be done, and though next year there should not be a single entry, I would continue that offer throughout the coming ages. The Ayrshire breed can be divided into two classes, the butter class and the milk class. Not neglecting the milk, we want to breed for quality for the butter class; and if every breeder to-day, will, by the use of the Babcock test, set out with that idea of breeding after testing his cows to show the highest quality of butter fat, and breed from bulls out of cows that always have had that high quality—never less than 4 per cent. butter fat—I think that in a few years we should have a much higher standard as far as quality is concerned; no association of men can stand still in this world unless they want to go backward—the thing for us to do is to reach forward and in the future as far as our breed is concerned simply carry out those ideas if we want to

improve the breed and take the stand which the Ayrshire breed ought to take. It can stand then in competition with any and every other dairy breed. If we work on those lines for a few years we shall see the result without any doubt. I feel very strongly on this question. I am one of the oldest breeders here, with the exception, perhaps, of Mr. Drew and Mr. Wells. I was present at the first organization of this society, and I have missed only one meeting since, and I say this only to show the interest I have in the breed. I am still a breeder of Ayrshire cattle and hope to be as long as I live.

MR. WELLS—I would move an amendment to substitute 4 per cent. butter fat in place of 3 7-10.

MR. SEARS—I would like to second Mr. French's motion. I think it is the opinion of every one who has ever kept a mixed herd, and among them Ayrshires, that there is no better cow in the world, none that can give better receipts for the feed every day in the year than an Ayrshire, none with stronger personality or better or more vigorous constitution. But there is one thing we lack, if we are going to sell the milk in the market, which we must have to make a salable article, we lack, as Mr. French says, something in quality. The time was twenty years ago when all that was necessary to sell milk in New York market was to have the quarts. Now you must have butter fat. The people are coming to be more particular and the dealers are partly responsible for that. Now the only place in which you can find fault with an Ayrshire cow is in the quality of her milk, not in the total amount of the butter fat she will give, but she is so generous in the amount of the milk that the butter fat gets a little thinner than the market demands. The fact is, that this country has got so thoroughly supplied with everything it wants, that quality commands the market and without quality you cannot command it. The best things are now so

plenty ; the medium things are overstocking the market all the time. And if we can, and I know we can, add not only to the quality but retain the quantity of milk from the Ayrshire cow, I believe the child brought up on Ayrshire milk will take into its system some of the nervous energy that belongs to the Ayrshire cow, some of the ability to resist disease and the nervous activity that belongs to the animal itself, a vigorous constitution which will last all its life, and I know something about it, for I fed a boy on pure Ayrshire milk myself for a year or two. I think we want to go forward. We want to convince the public that the Ayrshire cow can give excellent milk as well as rich milk, and it is one great advantage in the Ayrshire milk that the fat is so nicely distributed, that it is a purer fat than if it was more easily separated. It is hard to make the public believe that, but the prominent physicians here in New York tell me that the time will come when they will want the fat in the milk and not on top as it is now. And I would second the motion of Mr. French to increase the quality as we have made every effort before to increase the quantity. And I would move that the same committee be continued in charge of the tests.

MR. WELLS—Does this cover the amendment?

THE SECRETARY—If I may say a word on the amendment. Mr. French and I had long and serious discussions over the place to stop on percentage of butter fat. We thought we were getting it high, if we were to keep up the quantity as well as quality. An Ayrshire cow that would give 4 per cent. butter fat six months after calving, would as a new milch cow, give a high quality of milk if she gave 3 7-10 per cent. butter fat, and we did not wish to encourage a decrease of the quantity but to keep the quantity and preserve the quality. Now it seems to me if we place it at 4 per cent. we are going to have cows entered at the fair that are not what we would prefer. We would like to

have new milk cows entered and we will compel them to show cows for this Fair test that are advanced in lactation if we raise the standard to 4 per cent. As it is now, it is left with the Committee to arrange the quantity of butter fat. The Committee can put it at 4 per cent. if thought advisable, but it was with a good deal of hesitation that we placed it at 3 7-10 per cent. butter fat. We thought perhaps we were shutting out a good many cows. I know of some men who wanted to show their cows at the Fair and went there with their herds to show in the ring but did not show in the butter fat test because their cows could not qualify on a 3 7-10 per cent. basis.

MR. WELLS—Pardon my ignorance, but I did not know there was such a change in the butter fat standing of a cow's milk.

MR. FRENCH—I should hope that five or ten years from now we could very well make it 4 per cent., and perhaps later on make it 5 per cent. Let us look forward to such an ideal cow; but just now, at this present time, when we are trying to lift the standard, I agree with Mr. Winslow that 3 7-10 per cent. is high enough, and just as soon as we can, I am sure he will agree with me, we will make it 4 per cent. so far as our Committee has to do with it. But the Committee cannot do that itself if the breeders in their own homes and on their own farms among their own cows do not have a standard high which will lead up to it.

THE SECRETARY—In this connection I would say, that two years ago we had entered at the New England Fair a large number of cows, and not one in that whole entry were eligible and the whole lot were thrown out. I know I said to Mr. French afterwards, "Hadn't we better lower that per cent. in order to get them in?" He said, "No, hold it right up, if they can't get there let them breed to it."

The motion of Mr. French was voted unanimously and on motion of Mr. Sears the same committee were

continued for the coming year., viz: Mr. French and Mr. Winslow.

### REPORT OF PRIVATE TESTS OF HERDS.

Your Secretary prepared and sent out the following set of questions to all known owners of Ayrshire cows in the United States and a few to Canadian Breeders.

SECRETARY'S OFFICE,  
AYRSHIRE BREEDERS' ASSOCIATION.

BRANDON, VT., Feb. 1, 1898.

In the general interests of Ayrshire Breeders, I would like to make a statistical report at our next Annual Meeting, and in order that I may have the material to work with, will you fill out the answers to as many of the following questions as possible and return to me on or before January 10, 1899?

C. M. WINSLOW.

How many thoroughbred Ayrshire cows and heifers do you milk? Is your herd used for the production of milk, butter or cheese? Do you weigh the milk from your herd? If so, how often? What is the individual yield of your herd in Milk or butter? (Give as full report as possible on separate sheet.) Do you make Babcock tests of the milk of your cows? If so, give per cent. butter fat of each cow, and full statement of number of tests from which the average is obtained. What is the average yield of your herd in—Milk? Butter? Cheese? What is your method of food and care? In all reports of yields please state exactly how they are obtained, and use as little guess-work as possible, for reliable statistics are of value, even though of less quantity than estimated yields, and the more frequently weights and measurements are taken the more value are the results. If you have any good photographs of your cows, please send them to me, as we are greatly troubled to obtain good photographs from which to make half-tone cuts for illustration.

C. M. WINSLOW.

In answer to the above he has received the following replies :

Geo. Bement, East Oakland, Cal., writes that of late there are a great many inquiries for Ayrshires, more than he has known for five years, and that he has sold out. This herd was the noted Peter Coutt's herd that was picked up around Providence, R. I., some years ago and taken to California.

F. M. Babcock, Gouverneur, N. Y., keeps from twenty-five to thirty cows and heifers. Weighs and tests to satisfy himself as to individuality of cow, but gives no figures.

W. H. Norton, Allentown, N. Y., keeps thirty-five cows and heifers. Sends milk to cheese factory and has better returns than his neighbors.

L. Banks Holt, Graham, N. C., three cows, keeps no individual record. Estimates they will give when fresh, from five to six gallons of milk per day and from five to nine pounds of butter per week. Average 14 to 16 quarts a day, sixteen cows, weighed monthly. Writes that Ayrshires sell well and are being hunted up, as they suit that climate.

A. W. Hunt, Brunswick, Me., reports Dorothy Alaska as giving 7,300 pounds of milk in a year.

B. Luther Shimer, Bethlehem, Pa., fifteen cows, weighs milk about half the time and estimates a yield of from 6000 to 9000 pounds in a year. Milk bottled and sold in town. Milk tests the highest of any sold in town and brings the highest price. Cows soiled in summer except a few hours morning and evening at pasture. In winter they are fed hay and ensilage, with bran, oil meal and gluten meal, water has chill taken off.

Thomas Turnbull Jr., Monaca, Pa., twenty cows, herd lately established, milk weighed at each milking and tested monthly, and tests 4.22 per cent. butter fat.

C. L. Peck, Coudersport, Pa., ten cows, milk weighed weekly, average 4 per cent. butter fat. Esti-

mates his cows will average 7000 pounds of milk and 300 pounds of butter.

C. H. Boynton, Lisbon, N. H., five cows, does not weigh or test.

Howard Cook, Beloit, Ohio, eight cows, milk sent to cheese factory. Eight Ayrshires and four grade Ayrshires average 5,152 pounds as a whole for eight months at factory. Cows tested once and run from 3 per cent. to 4.5 per cent. butter fat. Miss Douglas 10265, gave 54 pounds of milk on grass with three quarts of bran extra, tests 3.60 per cent. butter fat.

H. W. Cunningham & Son, Cherry Creek, N. Y., twenty-eight cows, milk weighed monthly, tests 4 per cent. Estimated yield, 6000 pounds of milk and 240 pounds of butter.

Obadiah Brown, Providence, R. I., sends a copy of record of Flora Temple 3d, 402:

Cow - FLORA TEMPLE 3rd. Number 402. Dropped calf, April 25, 1874. Weight of cow, 1035 lbs.

Months.	Qts. per day.	Greatest daily yield.	Least daily yield.	Total qts.	Total lbs.
May,	24	29 $\frac{1}{4}$	22	744 $\frac{3}{8}$	1582
June,	29	30 $\frac{3}{8}$	28	870	1848 $\frac{3}{4}$
July,	26	29	20 $\frac{1}{2}$	806	1714
August,	24 $\frac{1}{3}$	26	22	753 $\frac{1}{2}$	1601
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	103 $\frac{1}{8}$	114 $\frac{5}{8}$	92 $\frac{1}{2}$	3173 $\frac{7}{8}$	6745 $\frac{3}{4}$

Average per day, 25 5-6.

This is a true copy of the record kept by brother Joseph.

OBADIAH BROWN.

January 4, 1899.

He also reports Manton Queen 4th, 6200, as giving 4.29 per cent. fat, 9.26 per cent. solids not fat, and 13.55 per cent. total solids, as tested by Geo. E. Perkins, State Assayer. This cow gave 49 pounds 5 ounces milk at the Madison Square Garden, May 14, 1887, winning first premium for largest quantity of milk in one day. She also has a private record of 12,162 pounds of milk in one year.

Geo. H. Bowker, Barre Plains, Mass., fourteen cows, sends milk to Boston, does not weigh or test.

A. G. Smith, Wellington, Ohio, fourteen cows, milk weighed at each milking :

INDIVIDUAL RECORDS.

	1892	1897.	1898.
Anna Douglas, 9069	9800 lbs.	7328 lbs.	7078 lbs.
	1896		
Mari'n S.,	64 $\frac{1}{2}$ 3	5820 $\frac{1}{2}$	6056 $\frac{1}{4}$
Nettie V. 2d,	5057	4882 $\frac{1}{2}$	5281 $\frac{1}{2}$ .
Miss Zella,	7251 $\frac{1}{2}$	6531	Vealed calves.
Anna Douglas 2d,	6159 $\frac{1}{4}$	5493	5854 $\frac{3}{4}$
Anna Douglas 4th.		(4 years)	5798
Stella S., not registered,		(4 years)	7034 $\frac{3}{4}$
Nettie V. 3d,		(4 years)	4991 $\frac{1}{4}$

As to feed, winter months, cut corn fodder and oat straw for noon and night feed, mixed hay for morning, about 3 lbs. of bran and 3 lbs. corn and cob meal per day. Soft corn in fall takes the place of meal. No 3 and 6 being winter cows were fed  $\frac{1}{3}$  more grain. Summer feed, 1 to  $1\frac{1}{2}$  lbs. of bran twice daily, just enough to bring them to barn. Care, housed from storms winters and change of pasture occasionally summers.

Arden Farms Dairy Co., Arden, N. Y., twenty cows. Weigh milk occasionally, about two weeks and again three months after calving. Estimated yield at that time about 40 to 48 pounds a day. Cows test from 3.80 per cent. to 4.20 per cent. Have two hundred and thirty cows and none compare with the Ayrshires.

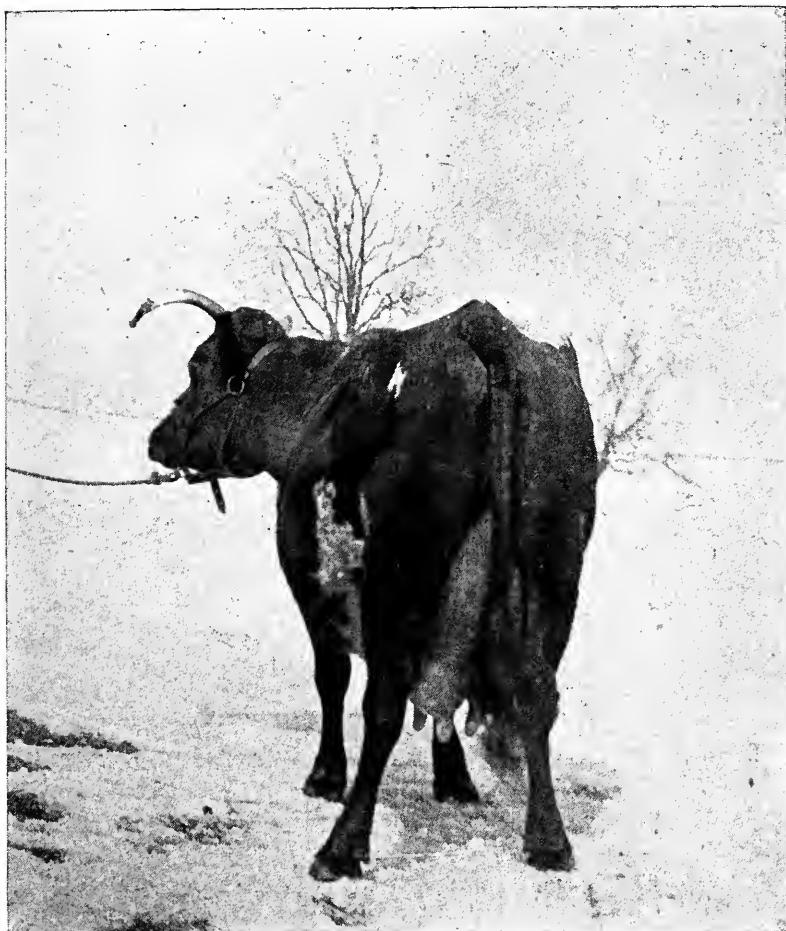
N. E. Sears, Elmwood, Conn., seven cows. Is keeping a record of three, but year not expired, weighs milk at each milking. Official test for six cows in 1897, 3.99 per cent fat, 13.04 per cent. total solids.

C. D. Sage, No. Brookfield, Mass., sixteen cows, milk sent to Boston, does not weigh or test.

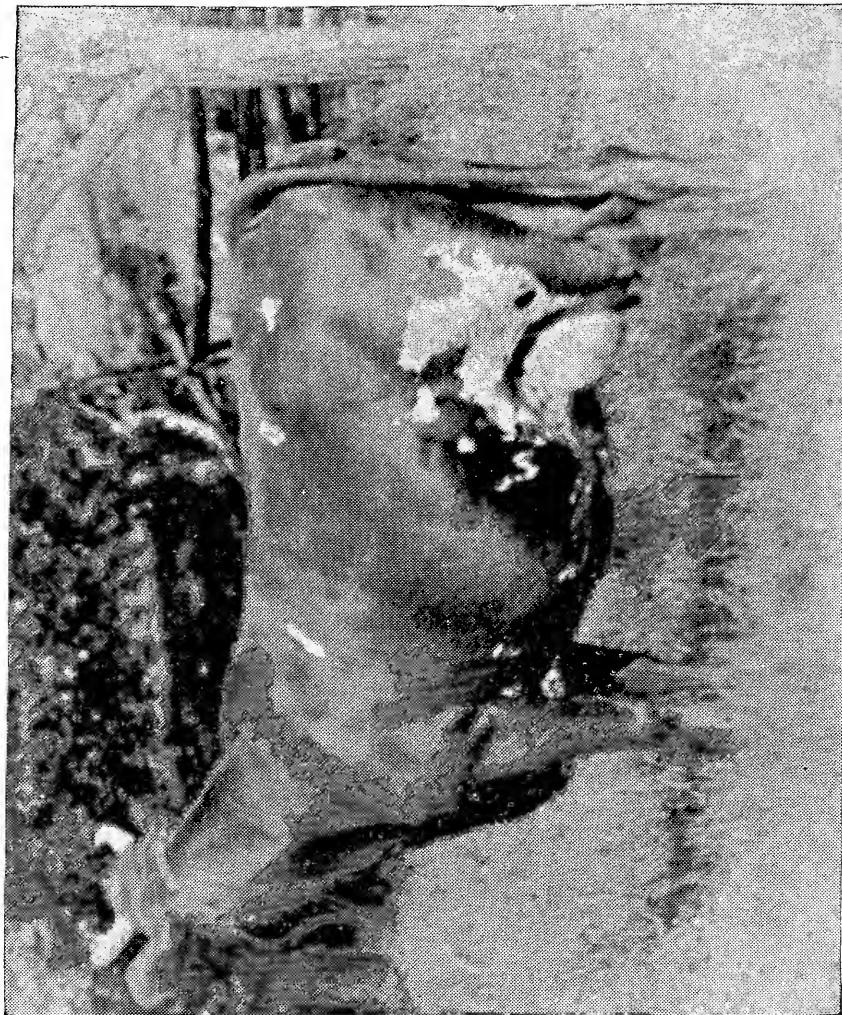
A. H. Fisher, St. Albans Hill, Vt., seven cows, manufacturers butter but keeps no records.

Ira W. Jones, Alfred, N. Y., six cows, milk weighed weekly. The three that have completed a full year gave as follows :

Belle Hebron, 13013, at 4 years old gave	-	-	-	9084
Nellie Clyde, 12723, at 4 years old gave	-	-	-	10507
Jennie Clyde, 12028, at 7 years old gave	-	-	-	8573



LADY FOX. 9669.



ROSA. 3143.

E. J. Fletcher, Greenfield, N. H., ten cows, weighs milk from three of the cows morning and night. Durwood, 12680, whose year is not through, has given over 9000 lbs., gave 5000 lbs. in four months, gave an average of 50 lbs. for 7 days. In April, when tested, she was giving an average of 34 lbs. of milk which tested 4.6 per cent. fat. After being in milk four months she is giving 36 lbs. daily on an average.

Himona, 13032, gave 8206 lbs., - - - - 4 per cent. fat.  
Collinwood, 11404, gave 7800 lbs., - - - - 3.8 "

S. C. Drew, Cuba, N. Y., twelve cows, weighs milk about once a week, mature cows average 52 lbs. a day. Average test 4.20 per cent. fat.

Wm. Stanford Stevens, St. Albans, Vt., six cows, keeps no records.

State Industrial School, Vergennes, Vt., fourteen cows, milk weighed at each milking, older cows average over 6000 lbs.

A. A. Hunnewell, New Gloucester, Maine, 4 cows, milk weighed occasionally, estimate 7000 lbs. milk and 350 lbs. of butter in a year.

Charles C. Doe, South Newbury, Vt., ten cows individual record for 1898:

Name.	Milk.	Per cent. Butter.	Butter fat plus 1-6.
Maid of Killdrummie, 13973,	3345.5	3.36	131.
Florence Douglas of Warren, 12999,	5708	3.65	243.
Norna of Brookside, 13004,	4677	3.93	215.
Edith of Brookside, 13871,	5133.5	3.72	222.
Lady G, 13882,	5707.5	3.40	216.
Fanny Carston, 12772,	7567	3.30	291.
Rose Lonsdale, 12780,	7702	3.91	301.
Rose Lastrea, 12786,	6269	4.37	319.
Sarah Lorne, 12779,	6879	3.00	240.
Katie Lorne, 12792,	7272.5	3.75	318.
Average,	6035	3.64	229½.

Milk weighed at each milking. The percentage of fat is an average of tests made by the State Experiment Station.

In summer the cows have pasture adjacent to barn with no grain during May and June. In winter, are fed hay and ensilage, 7 to 9 pounds of bran and gluten meal, watered once a day with cold water.

A. H. Elliott, Garrattsville, N. Y., fifteen cows, milk weighed two or three times during the year. The following is the result of a two day test by the N. Y. State Experiment Station, July 1st and 2d, 1897:

	Milk.	Per cent. Fat.	Per cent. Total Solids.	Lbs. of Fat.
Bonnie Beauty,	58.8	4.02	13.20	2.45
Bonnie B,	60.24	3.49	12.42	2.15
Princess P,	53.8	3.64	12.50	1.94
Bessie Primrose,	61.52	3.47	12.28	2.15
Daisy Primrose 2d,	56.22	3.68	12.75	2.13
Mina B,	66.2	3.79	12.58	2.49
Edith Primrose,	55.14	4.15	13.09	2.32
Nellie Primrose 2d,	57.24	3.09	11.84	1.84
Flossie H,	54.14	3.60	12.47	1.97
Jane Primrose 2d,	44.16	3.82	12.64	1.73

Hecla Farm, Uxbridge, Mass., eight cows:

Zell Douglas, No. 12014,	8234	pounds of milk in 358 days.
Dolly Linwood, No. 12817,	8072	" " " 285 "
Hazle Kirk, No. 11450,	7700	" " " 306 "
Flora Kirkwall, No. 12016,	7353	" " " 350 "
Zazel, No. 13588,	5861	" " " 310 "
Zell Russell, No. 12818,	5707	" " " 282 "
Trilby, No. 13598.	3699	" " " 179 "
Maid of Park Hill, No. 13590,	3054	" " " 178 "

Average, 6209 $\frac{3}{4}$ .

This herd has been well housed and cared for, they have been watered twice a day, fed on ensilage and poor hay, and have had a light grain ration; 40 pounds ensilage, 6 to 8 pounds poor hay, 4 pounds shorts, 2 pounds corn meal and 1 pound gluten or cotton seed meal per day.

I. E. HOLLIS, Superintendent.

Charles H. Hayes & Sons, Portsmouth, N. H.,  
Thirty cows, milk weighed at each milking.

Name	Herd Book No.	Age	Lbs. milk	Per ct. butter fat	Lbs. butter
Fernleaf,	9467	6-9	8131	4.09	395
Murilla,	13376	8	7680	4.31	397
Marrionette,	9391	7-1	7607	3.31	302
Crowwood,	11101	5-10	7417	4.13	367
Clanwood,	11103	5-8	7199 $\frac{1}{2}$	3.65	315
Cuban Lass,	10158	6	6671	4.00	320
Diannalyne,	11109	4-5	6566	not in milk.	
Marchwood,	11104	5-8	6436	4.63	357

Daccyle,	9198	7-3	6280	not in milk.	
Dirtha,	9194	7-7	6265	3.54	266
Marcia—first calf					
in 9 mos.	11111	3-8	6060	3.79	275
Collina,	9191		5898	Sold.	
Como,	9389	6-10	5719½	Sold.	
Cadron,	10994	4-1	5685	4.42	301
Cheviot,	11108	4-9	5632	not in milk.	
Comla,	8396	10-4	5525	not in milk.	
Creolynn,	11107	5	5500	4.35	287
Morocco,	13462	4-2	5066½	3.78	229
Extraction,	10999	3-11	4782½	not in milk.	
Hersa—first calf					
in 8 mos.	10157	2-11	4542½	not in milk.	
Claret,	6586	12-6	4355½	not in milk.	
Crimson—first calf					
in 8 mos.	11207	2-11	4138	4.70	233
Comwood—first					
calf in 5½ m.	11000	3-10	3488	3.89	162

Twenty-five cows average 6432 lbs. Thirty cows average 6068 lbs. Average butter fat 4.06 per cent. Average lbs. butter, mature cows, 326. This is the first time we have tested the herd for butter and several cows are omitted.

Comla, No. 8393, has averaged for eight years 6715 lbs.

Fernleaf, No. 9467, has averaged for three years 7609 lbs.

Lady Murcia with first calf in nine months 6060 lbs.

Lady Clanwood, 11103, commencing with first calf, has averaged in two years 7710 lbs.

Eva's Girl, No. 7309, has given 36,046 lbs. in seven years.

Cherry of Portsmouth, No. 6685, has given 35,884 lbs. in seven years; 1400 lbs. in 30 days; 52½ lbs. in one day.

Creole, No. 6593, gave 36,634 lbs. in five years.

Crowfoot, No. 6595, gave 13,167 lbs. in four years, commencing with first calf at two years of age.

Maid of Arlis, No. 8395, gave 6755½ lbs. as a three-year-old.

Mary 2nd, has given 36911 lbs. in five years; 70 lbs. in one day; 1500 lbs. in thirty days, and 9802½ lbs. in one year.

Lady Teazle, No. 6579, gave 15035½ lbs. in two years.

Queen Mary, No. 6578, gave 16643 lbs. in two years; 403½ lbs. in seven days; 1669½ lbs. in thirty consecutive days; 3192 lbs. in sixty consecutive days; 5000 lbs. in one hundred days and 10580 lbs. in two hundred seventy-three days.

1885 Nine cows, four years and over, average 5908 lbs.

Ten heifers, three years old, average 5045 3-10 lbs.

Five heifers, two years old, average 4683 2-5 lbs.

1886	Eighteen cows and heifers average 5942½ lbs.
	Five best cows, average 8081 4-5 lbs.
1887	Seventeen cows average 6320½ lbs.
	Five heifers with first calf, average 4451 lbs.
1888	Twentyfour cows and heifers, average 5895 lbs.
1889	Twenty cows and heifers, average 5446 lbs.
1890	Twenty cows and heifers, average 5467 lbs.
1891	Twenty cows and heifers, average 5775 lbs.
	Seven best average 7001 lbs.
1892	Thirty cows and heifers, averaged 6001½ lbs.
In 1894	thirty cows and heifers averaged 5969 pounds of milk.
The best ten averaged,	7301      "      "
In 1895	thirty cows and heifers averaged 5631 pounds of milk.
The best ten averaged,	7403      "      "
In 1896	thirty-six cows and heifers averaged 6434      "      "
The best twelve averaged,	7262      "      "
The best five averaged,	8037      "      "
In 1897	thirty cows and heifers averaged 6567      "      "
The best sixteen averaged,	7289      "      "
The best seven averaged,	8046      "      "

Lady Murcia, No. 11111, dropped calf February 23, 1898, and gave in ten months 10820 pounds milk and is due to calve in March.

Murrilla, No. 13336, eight years record,	6645
Diannalynne, No. 11109, six years record,	7767
Dainty Princess, No. 11433, three first calves average,	7743
Clanwood, No. 11103, five years average,	7848
Comla, No. 8396, eleven years record,	7143

These yields are all correct as can be made by the scales, no guess work or estimation. Feed and care same as usual, or as others give their cattle, they have about all that is required, and we try to get as much milk as possible without detriment to the cow.

C. S. Pixley, White Oak, S. C., nine cows.

	Pounds Milk.	Per cent. Fat.
H. B. No. 11775	4760	4.4
"      "	2770	3.5
"      " 12249	3685	5.
"      " 11422	3168	4.4
"      " 11428	2659	5.5
"      " 13027	3106	4.6
"      " 12247	3882	4.6
"      " 13029	2196 six months.	4.3

Cows cared for by negroes who need improving.

## Vermont Experiment Station, Burlington, Vt.

1895.

	Weight.	Milk.	Per cent. Total Solids.	Per cent. Fat.	Lbs. Butter.
Rena Myrtle,	1100	11417	12.40	3.78	503
Acme 5th,	930	8092	12.94	4.05	382
Atalanta,	770	6639	12.62	3.85	297
Nancy B.	950	7831	12.88	3.90	356
Nett,	1020	8437	12.99	3.99	393

1896.

Acme 5th,	930	8183	12.90	4.04	386
Atalanta,	870	7312	12.44	3.69	314
Nancy B,	1040	6068	13.08	4.06	287
Nett,	1000	6923	13.06	4.05	327

C. M. Winslow & Son, Brandon, Vt., nineteen cows, milk record for 1898.

Name	No.	Age	Milk	Test	Butter	Total Solids
Clio Rose,	7525	14	7028	4.15	348	12.84
Rose Electa,	10336	9	7899	3.92	372	12.37
Rose Deruth,	10346	8	4802	4.50	259	12.94
Rose Deross,	10347	8	8084	4.48	452	13.22
Rose Cleon,	11143	7	8171	3.80	372	12.37
Rose Clenna,	11153	6	7117	6.00	512	12.92
Rose Allie,	11154	6	6729	4.05	327	12.63
Rose Ladye,	11158	6	6814	4.00	327	12.17
Rose Sultana,	12072	5	8907	3.88	386	12.25
Rose Veritas,	12076	5	7094	4.68	404	13.32
Lerea Douglas,	12093	4	6149	3.31	244	12.47
Acelista,	12094	4	8416	4.02	406	12.59
Rose Erica,	12775	4	6581	5.20	411	12.37
Iola Lorne,	12773	4	8606	4.60	474	13.57
Rose Clovis,	12777	3	6936	4.64	386	13.30
Rose Dyna.	12782	3	7494	3.15	283	12.24
Rose Colby,	12788	3	4393	4.90	258	12.39
Rose Elenore,	12791	3	5203	4.50	281	13.16
Rose Levity.	12794	3	5637	3.80	257	12.91

Average Milk for the year 6956 pounds.

Average Butter for the year, 353 pounds.

Average per cent Butter Fat, 4.29

Average per cent. Total Solids, 12.74

Reynard 6038, a son of Lady Fox 9669, whose record is 12299 pounds of milk and 624 pounds of butter in a year, stands at the head of the herd.

Sons of the following cows have stood at the head of this herd:—Quess 2nd, 3120, record 14.7 butter in seven days;

Duchess of Smithfield 4256, record 10748 pounds of milk in a year and 19.6 butter in seven days; Queen of Ayr 5th, 4466, record 14331 pounds of milk; Manton Queen 4th, 6100, record 12162 pounds of milk, 4.29 per cent. butter fat and 13.55 per cent. total solids; Clio Rose, 7525, record 8455 pounds milk, 441 pounds butter; Lovely, 9596, record 8765 pounds milk, 448 pounds butter; Rose Deross, 10347, record 10645 pounds milk, 572 pounds butter. Also full brother to Rena Myrtle, 9530, record 12172 pounds milk and 546 pounds butter in a year.

Best 365 consecutive days' milk record of cows that have given 8000 lbs. or over.

Name	No.	Milk
Rose Elles,	9540	8000 pounds.
Acorn,	4492	8031 "
Myrtle Dell,	3854	8068 "
Alta Rose,	7521	8143 "
Rose Cleon,	11143	8171 "
Acme 5th,	10342	8183 "
Rose Ladye,	11158	8194 "
Rebekah,	4496	8338 "
Lillian Douglas,	11058	8351 "
Acelista,	12094	8416 "
Acme,	5075	8436 "
Rose Cleenna,	11153	8438 "
Clio Rose,	7525	8455 "
Avona,	4494	8476 "
Bonnie Nannie 4th,	11701	8507 "
Iola Lorne,	12773	8606 "
Lovely,	9596	8765 "
Miss Hesba,	10433	8766 "
Rose Erica,	12775	8864 "
Rose Sultana,	12072	9172 "
Roxie,	4498	9191 "
Rose Deruth,	10346	9253 "
Rose Alta,	9529	9307 "
Rose Electa,	10336	10207 "
Ruth,	4816	10219 "
Rose Eola,	8510	10323 "
Rose Deross,	10347	10645 "
Rena Myrtle,	9530	12172 "

Best 365 consecutive days' butter record of cows that have given over 300 pounds.

Name.	No.	Butter.
Alta Rose,	7521	304 pounds.
Rose Ethel,	11148	313 "
Roxie,	4498	316 "
Rose Laross,	12081	316 "
Rosalena,	8502	318 "
Avona,	4494	326 "
Lady Avondale 3rd,	2625	346 "
Rebekah,	4496	347 "

Hesper,	8528	355	"
Rose Cleon,	11143	372	"
Lillian Douglas,	11058	374	"
Miss Hesba,	10433	376	"
Bonnie Nannie 4th,	11701	381	"
Acme 5th,	10342	386	"
Rose Clovis,	12777	386	"
Rose Deruth,	10346	389	"
Rose Veritas,	12076	404	"
Queen Selga,	9545	404	"
Rose Allie,	11154	405	"
Acelista,	12094	406	"
Rose Alta,	9529	420	"
Rose Sultana,	12072	421	"
Ruth,	4816	425	"
Clio Rose,	7525	441	"
Lovely,	9596	448	"
Rose Ladye,	11158	463	"
Rose Electa,	10336	467	"
Iola Lorne,	12773	474	"
Rose Erica,	12775	504	"
Rena Myrtle,	9530	546	"
Rose Deross,	10347	572	"
Rose Clenna,	11153	607	"

## NINETEEN YEARS' MILK RECORD.

In 1880, 10 cows averaged	6035	pounds milk.
1881, 11 "	6176	" "
1882, 9 "	6672	" "
1883, 15 "	6168	" "
1884, 16 "	6814	" "
1885, 11 "	7025	" "
1886, 16 "	6238	" "
1887, 16 "	5782	" "
1888, 16 "	6356	" "
1889, 15 "	5836	" "
1890, 17 "	5480	" "
1891, 14 "	5971	" "
1892, 12 "	6249	" "
1893, 10 "	6233	" "
1894, 19 "	6454	" "
1895, 17 "	6765	" "
1896, 16 "	7289	" "
1897, 15 "	7228	" "
1898, 19 "	6956	" "

Average for nineteen years, 6407 pounds.

L. S. Drew, South Burlington, Vt., milk record.  
From January 1, 1892, to December 31, 1892.

Cow's Name.	Reg. No.	Age.	Days in milk.	Lbs. for 1 year.	Avg. lbs. for 1 day.	Per cent. of butter fat.
Nancy B,	9581	5	307	8416	27	4.
Miss Flow 4th,	9579	5	307	7815	25	4.70
Victorine,	8936	7	289	7007	24	4.20
Miss Nellie,	9417	6	305	6360	21	4.70
Printsteps 2d,	8410	9	291	6329	22	5.20
Frankie 5th,	8406	8	259	6112	24	4.70
Miss Mabel,	6348	13	257	6084	24	Not in milk.
Miss Mabel 2d,	8930	7	260	5956	23	3.70
Printsteps,	6363	10	285	5553	19	4.60
Minnehaha,	10878	2	288	5498	19	4.
Miss Cornelia 4th,	9454	6	309	5455	18	4.40
Flow,	6345	13	266	5308	20	3.60
Nellie Conley,	9580	5	317	5072	16	4.
Pink Conley,	9583	5	259	4760	18	4.20
Hazel B,	10721	3	296	4500	15	3.80
Prinsteps 5th,	9574	5	268	4374	16	3.70
Lolita 2d,	10723	3	283	4368	15	5.30
Miss Grace 3d,	9578	5	221	4280	19	4.
My Fancy,	10877	2	234	3838	16	4.70
Nett,	10169	4	192	3709	19	3.80

Average, 6015 pounds of the first fifteen cows.

Average of the full herd, 4.28 butter fat.

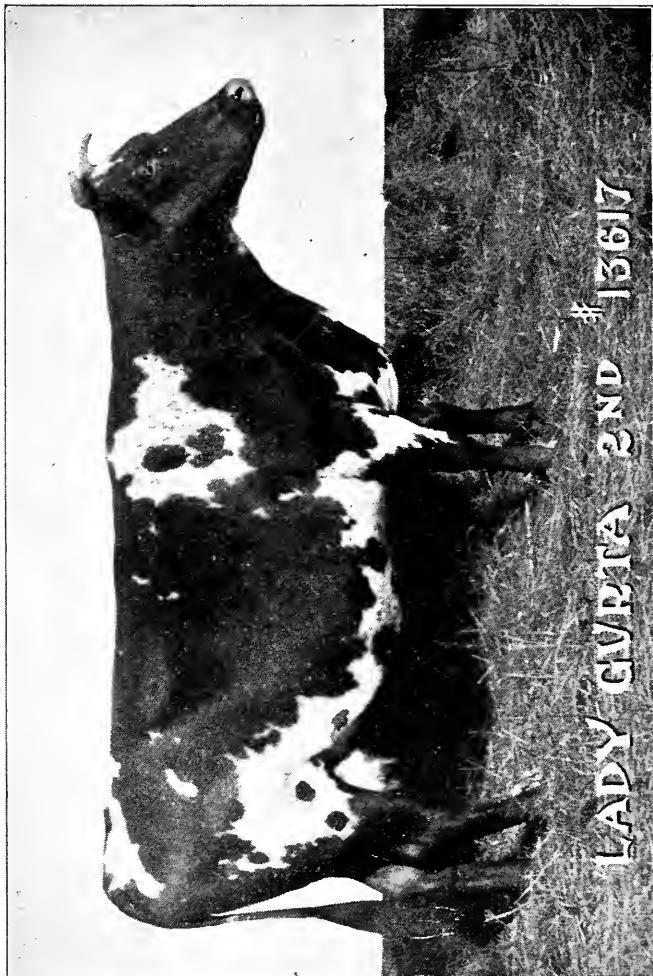
From January 1, 1893, to December 31, 1893.

Cow's Name.	Reg. No.	Age.	Days in milk.	Lbs. milk for 1 year.	Avg. lbs. for 1 day.	Lbs. of butter for 1 yr.
Nancy B,	9581	6	323	8145	25	361
Flow 4th,	9579	6	283	7710	27	358
Nett,	10169	5	334	7576	23	355
Printsteps 2d,	8410	10	316	7205	23	371
Pink Conley,	9583	6	277	7149	26	312
Mabel 2d,	8930	8	265	7044	19	289
Cornelia 4th,	9154	7	264	6932	26	345
Miss Nellie,	9417	7	269	6313	23	306
Victorine,	8936	8	246	6247	25	281
My Fancy,	10877	3	342	6075	18	287
Minnehaha,	10878	3	281	5779	20	283
Grace 3d,	9578	6	323	5683	17	320
Lolita 2d,	10723	4	283	5375	19	244
Hazel,	10721	4	315	5346	13	259
Nellie Conley,	9580	6	286	5317	18	272
Frankie 5th,	8406	9	254	5146	20	252
Roanett,	11476	2	245	4318	17	176
Little Nell,	11477	2	203	4197	20	162
Fanoline,	11482	2	251	3770	15	168
Flow 6th,	11479	2	209	3896	19	160
Sadie Tascott,	11483	2	222	3765	17	147
Lolita 3d,	11481	2	232	3555	15	157
Printsteps 7th,	11478	2	183	2893	15	134

Average of the first 16 cows, 6440 pounds milk.



DUCHESS OF SMITHFIELD. 4256.



# 13617

2ND

LADY GYPSY

From January 1, 1894, to December 31, 1894.

Cow's Name.	Reg. No.	Age.	Days in milk.	Lbs. milk for 1 year.	Avg. per day.	Lbs. butter for 1 year.
Miss Flow 4th,	9579	7	290	7655	21	381
Miss Cornelia 4th,	9154	8	294	7131	24	348
Miss Nellie,	9417	8	289	6964	24	314
Pink Conley,	9583	7	265	6002	22	278
Hazel B,	10721	5	251	4748	19	230
Lolita 3rd,	11481	3	252	4659	18	201
Printsteps 7th,	11478	3	238	4543	19	240
Nellie Conley,	9580	7	226	4509	20	210
Victorine,	8936	9	242	4565	18	220
Roanette,	11476	3	298	4357	15	220
Sadie Tascott,	11483	3	318	3760	12	177
Little Nell,	11477	3	297	3658	12	168
Nancy B 2nd,	11936	2	204	3244	16	144
Little Josie,	11928	2	173	2950	17	143
Blanche Tascott,	11934	2	169	2775	16	154
Pride of Burlington,	11932	2	148	2575	17	122
Minnehaha 2nd,	10878	2	150	2390	16	120
Sheba,	11931	2	130	2324	18	118
Keep Her,	11930	2	153	2292	15	110

Average of the full herd is 4.18 butter fat.

From January 1, 1895, to December 31, 1895.

Cow's name.	Reg. No.	Age	Days in milk.	Lbs. milk for 1 year.	Lbs. butter for 1 year.
Printsteps 2d,	8410	12	332	7448	418
Victorine,	8936	10	354	7049	372
Miss Nellie,	9417	9	280	7062	360
Pink Conley,	9583	8	270	6814	340
Sheba,	11931	3	360	5809	339
Little Nell,	11477	4	360	6388	329
Little Josie,	11928	3	334	6085	321
Nelly Conley,	9580	8	282	5775	311
Blanche Tascott,	11934	3	338	5226	301
Hazel B,	10721	6	300	6033	296
Nancy B 2d,	11936	3	327	6625	289
Roanette,	11476	4	323	6113	285
Minnehaha,	10878	5	223	5400	268
Pride of Burlington,	11932	3	318	5510	265
Minnehaha 2d,	10878	3	312	4935	236
Sadie Tascott,	11483	4	330	5430	250
Keep Her,	11930	3	338	5307	230
Lolita 3d,	11481	4	272	4516	189
Nett 2d,	11935	2	304	4500	220
Nina Smithfield,	12645	2	234	4032	241
Lady Sears,	12641	2	238	4262	204
Lady Watson,	12644	2	102	2021	104
Miss Nellie 2d,	12642	2	224	4062	201
Miss Ollie,	12039	2	112	1957	100

First twelve cows average 6369 lbs. milk.

First seventeen cows average 306 lbs. butter.

From January 1, 1896, to December 31, 1896.

Cow's name.	Reg. No.	Age.	Days in milk	Lbs. milk for 1 year.	Lbs. butter for 1 yr.
Sheba,	11931	4	300	6121	367
Miss Ollie,	12039	3	300	6200	348
Hazel B,	10721	7	304	7396	344
Printsteps 8th,	12643	3	264	6630	334
Pink Conley,	9583	9	302	7395	328
Miss Nellie 2d,	12642	3	265	6207	316
Little Josie,	11928	4	308	6381	313
Minnehaha 3d,	12646	3	290	5940	306
Nancy B 2d,	11936	4	271	6215	305
Lady Sears,	12641	3	269	6220	298
Pride of Burlington,	11932	4	289	5984	287
Nett 3d,	12647	3	244	5930	284
Sadie Tascott,	11483	5	296	6161	283
Lady Watson,	12644	3	288	5700	273
Keep Her,	11930	4	294	5652	271
Nina Smithfield,	12645	3	269	5243	250
Victorine,	8936	11	290	5352	243
Little Nell,	11477	5	305	4853	238
Lolita 3d,	11481	5	294	5340	230
Blanche Tascott,	11934	4	267	4560	230

First twelve, average 6380 lbs. milk.

First twelve, average 319 lbs. butter.

From January 1, 1897, to December 31, 1897.

Cow's name.	Reg. No.	Age	Days in milk.	Lbs. milk for 1 year.	Lbs. butter for 1 yr.
Minnehaha 3d,	12646	4	308	8872	424
Nancy B 2d,	11936	5	305	8012	412
Roanette,	11476	6	353	8016	393
Printsteps 8,	12643	4	315	7070	381
Nett 3d,	12647	4	333	7748	378
Miss Nellie 2d,	12642	4	305	6853	372
Sheba,	11931	5	247	7117	368
Minnehaha 2d,	10878	7	335	7579	354
Little Nell,	11477	6	288	7629	314
Sadie Tascott,	11483	6	306	7493	304
Hazel B,	10721	8	277	6623	301
Pride of Burlington,	11932	5	304	7171	286
Minnehaha,	10878	7	245	5114	284
Lady Sears,	12641	4	288	6014	281
Miss Edna,	13218	2	214	4826	254
Lolita 3d,	11481	6	303	6333	249
Victorine,	8936	12	303	5781	242
Lady Watson,	12644	4	232	4632	222
Blanche Tascott,	11934	5	238	4008	206

Average 6678 lbs. milk as a whole.

Average 317 lbs. butter as a whole.

First twelve average 7515 lbs. milk.

First twelve average 355 lbs. butter by the Babcock test.

From January 1, 1898, to December 31, 1898.

Cow's Name.	Reg. No.	Age.	Days in milk.	Lbs. milk for 1 year.	Lbs. butter for 1 year.
Roanette,	11476	7	275	7820	384
Sadie Tascott,	11483	7	324	7633	369
Miss Nellie 2nd,	12642	5	275	7014	364
Hazel B,	10721	9	321	7714	360
Nett 3rd,	12647	5	306	7668	354
Lady Watson,	12644	5	314	7514	352
Nancy B 2nd,	11936	6	279	7610	347
Sheba,	11931	6	290	6973	334
Pride of Burlington,	11932	6	311	6801	321
Little Nell,	11477	7	303	7350	308
Minnehaha 2nd,	11929	8	279	6547	306
Pink Conley 3rd,	13217	2	314	5945	292
Miss Edna,	13218	3	291	5845	287
Minnehaha,	10878	8	243	5300	267
Blanche Tascott,	11934	6	306	5214	275
Aunt Abbie,	13220	2	288	6150	265
Victorine,	8936	13	288	5810	258
Lolita 3rd,	11481	7	266	4656	209
Roanette 2nd,	13222	2	276	4168	200
Nancy Rhea,	13476	2	310	4300	206

I am using, this year, at the head of my herd, a bull of my own breeding, Rising Star 5158, the first prize winner at the World's Fair.

My cows are kept on grass alone, from May 20th, to November 1st. This winter, one-half bushel ensilage, with small ears of corn, large ones taken out; four quarts of bran and Indian meal, equal weights; clover hay at noon and night.

TO WHOM IT MAY CONCERN:

This is to certify that I have this day tested with tuberculin the entire Ayrshire herd of L. S. Drew of South Burlington, and find it entirely free from tuberculosis.

F. A. RICH, V. S., M. D.

In the fall of 1891, in response to a premium of \$60 offered by the Vermont State Experiment Station in connection with the exhibitions of the Champlain Valley Association, I entered "Dolly Athol," who won the first premium, making a record of 31 pounds milk, from which was made 2 pounds 1-110 ozs. of butter fat, as tested by chemical analysis; or 1 pound of butter to less than 15½ pounds of milk, which is pronounced the highest record ever made in this country in a public Fair Ground test. Her feed was dry hay and eight quarts of wheat bran.

In 1892, "Printsteps 2nd" took the first butter prize at the same fair, and by the same test.

1893. Took two butter prizes on herd as a whole at the World's Fair, Chicago.

1894. Took prize for butter at Champlain Valley Fair.

1895. Took prize at Dairymen's Meeting, Rutland.

S. W. Merrill, Felts Mills, New York, four cows, no records kept.

B. O. Jackson & Son, Boonville, N. Y., twenty-five cows, Ayrshires and grade Ayrshires. For one week the average was 33 1-2 lbs. per day. Feed, 10 lbs. bran and gluten meal mixed with late cut hay.

F. P. and A. M. Cornell, Altus, Pa., twenty-three cows. Average yield, 238.6 oz. butter for the year. Feed, pasture with no grain in summer, good hay and corn fodder with 4 to 6 qts. ground corn on the ear, and oats.

Willis W. Hopkins, Aldenville, Pa., states that Bloom of Aldenville 9014, gave 460 3-4 lbs. butter, from February 10, '98, to Jan. 1, '99.

Stickle & Clark, Addison, Vt., four cows, milk weighed every Wednesday. Season of 1898.

Name.	Days in milk.	Lbs. of milk.
Daisy Istra,	310	5935
Fannie Forrester.	247	5800
Juanita,	355	6185

We feed good hay morning and night and second quality fodder noons, and about 7 lbs. of feed, one-third oats, one-third bran and one-third barley and corn, water twice a day.

H. R. C. Watson, Forest Park Farm, Brandon, Vt. Milk yield of Ayrshires for 1898.

Name.	Days in milk.	Amount.
Minnie Smithfield,	302	7872
Kirk's Printsteps,	349	7172
Lady Acme,	357	6469
Miss Hunter,	321	6398
Lady Smithfield 3rd,	351	6083
Bonnie Nannie,	365	5999
Ditto,	295	6015
Lady Smithfield 2nd,	323	7008
Kittie H,	311	5821
Acme 4th,	316	6112
Fernwood,	301	6185
Myra Douglas,	242	6515
Maid of Keeseeville,	331	5917
Marionette,	347	7430
Grand Duchess,	211	4218

From January 1, 1896, to January 1, 1897.

Name.	Reg. No.	Age.	Days.	Lbs.
Marionette,	9391	10	330	7235
Kirk's Printsteps,	11703	4	331	6270
Lady Smithfield 3d,	12724	3	307	5512
Lady Acme,	11340	5	346	5353

From January 1, 1897, to January 1, 1898.

Name.	Reg. No.	Age.	Days.	Lbs.
Marionette,	9391	11	300	7825
Myra Douglas,	11056	8	265	6984
Lady Smithfield 2d,	10824	7	302	6945
Lady Smithfield 3d,	12734	4	345	6371
Kirk's Printsteps,	11703	5	308	6160
Fernwood,	12258	4	287	6125
Lady Acme,	11340	6	311	5973
Kittie H.,	10541	8	291	5861
Maid of Keeseville,	12315	5	350	5830
Ditto,	12260	4	295	5374

Milk and butter record of George H. Yeaton's herd  
of Ayrshires, Hickory Hill Farm, Rollinsford, N. H.  
Post office box, 402, Dover, N. H. From January 1,  
1898 to January 1, 1899.

Name.	Herd Book No.	Age in years.	Pounds of milk.	Per cent. of butter fat.	Pounds of butter.
Lady Fox,	9669	11	11619	4.33	587
Biona,	12351	5	10024	3.53	413
Olah,	11471	6	8806	3.52	361
Ouija,	11882	5	8561	3.42	342
Yuba Lass,	12353	4	8310	3.75	374
Xoa,	11469	6	8254	3.90	377
Annie Bert,	9670	11	7697	3.88	347
Meewe,	11130	7	7457	4.35	379
Mexic,	11131	7	7330	3.70	326
Yucca,	11470	6	6951	4.00	327
Phronsie,	12359	4	6872	4.40	353
Miss Reynard,	10666	8	6778	4.24	335
Rayn,	12358	4	6481	3.54	268
Yensie,	10663	8	6436	3.95	297
Oke Mar,	13307	2	6130	4.35	313
Gladiola,	12352	5	6171	3.68	261
Lukolela,	12357	4	5997	3.71	260
Gano,	10664	8	5963	3.70	256
Molly Meade,	10661	9	5843	3.97	270
Freda,	11134	7	5720	3.76	251

The following are the records of cows that have given seven thousand pounds of milk in 365 consecutive days.

Name of cow.	Book number of cow.	Pounds of milk.
Lady Fox,	9669	12299
Meewe,	11130	11252
Biona,	12383	10024
Annie Bert,	9670	9613
Yucca,	11470	9496
Xoa,	11469	9232
Olah,	11471	9020
Lukolela,	12357	8678
Gano,	10664	8636
Mexic,	11131	8581
Ouija,	11882	8561
Yuba Lass,	12353	8310
Okeoeola,	8413	8023
Wallula,	9726	7926
Lady Crescent,	11880	7539
Jeanette Guelph,	8673	7470
Clem,	11135	7227
Ursuline,	12360	7162
Freda,	11134	7150
Molly Meade,	10661	7139

The following cows have made three hundred pounds of butter and over in 365 consecutive days as determined by the Babcock Test.

Name of cow.	Herd Book No.	Pounds of butter.
Lady Fox,	9669	624
Meewe,	11130	567
Yucca,	11470	444
Xoa,	11469	423
Mexic,	11131	419
Annie Bert,	9670	417
Biona,	12353	413
Olah,	11471	412
Wallula,	9726	389
Ouija,	11882	381
Lukolela,	12357	378
Lady Crescent,	11880	375
Clem,	11135	374
Gano,	10664	372
Okeoeola,	8413	364
Yuba Lass,	12353	348
Molly Meade,	10661	337
Miss Reynard,	10666	335
Yensie,	10663	333
Jeanette Guelph,	8673	332
Freda,	11134	326
Eolus,	11128	310
Waugh,	11467	303

## Five years' butter and milk record.

		Per cent. of butter fat.	Pounds of butter.	Pounds of milk.
In 1893, 12 cows averaged		4.02	270	6125
In 1894, 24	"	4.24	270	5501
In 1894, 12	"	4.49	328	6493
In 1895, 22	"	4.03	329	7144
In 1895, 12	"	4.22	383	8386
In 1896, 25	"	3.99	316	7006
In 1896, 12	"	4.28	378	8216
In 1897, 23	"	3.92	327	7164
In 1897, 12	"	4.14	375	8159
In 1898, 20	"	3.88	332	8220
In 1898, 12	"	3.92	377	7370

The milk from each cow of this herd has been tested at several different times during the year, by the "Babcock Tester," and the per cent. of butter fat for each cow is the average of these several tests made. The amount of butter is computed by adding one-sixth to the amount of butter fat, which is the formula adopted by all the Experiment Stations of the Country.

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**REPORT OF RAIL-ROAD COMMITTEE.**


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Your committee, appointed at the last Annual Meeting to communicate with other live stock associations in regard to excessive Rail-Road rates on live stock in less than car load lots, would respectfully report that we issued the following circular letter which we sent to each of the live stock associations of the United States, forty-four in all.

SECRETARY'S OFFICE,  
AYRSHIRE BREEDERS' ASSOCIATION  
BRANDON, Vt., —————— 189

To the Secretary of the

Dear Sir :

Complaints have been made by some of our breeders that the Rail Road rates for transportation of Cattle were so excessive as to seriously hinder their sales in small lots.

It is probably a fact that a united effort on the part of all the Stock Breeding Associations would have its

influence in securing a more satisfactory rate where it is too high and needs regulating.

Have any such complaints come to you from any breeders in your Association, and would you think it wise to make a united effort for uniform and reasonable Rail Road rates for shipment of thoroughbred stock for breeding purposes ?

The roads complained of are the D. L. & W. R. R. of New Jersey and the New York Central.

What would you suggest in the matter and do you think it advisable to bring it before your Association at your next Annual meeting ?

Very truly,

C. M. WINSLOW,

Secretary of the Ayrshire Breeders' Association.

In response to the above we received seven replies, some stating that no complaint had been made to their Association, others stating that they had tried to obtain lower rates but without effect and did not think it wise to attempt it again.

J. D. W. FRENCH, } Committee on  
C. M. WINSLOW, } RailRoads.

On motion of Mr. Wells the report was accepted, the Committee discharged and the matter was dropped.

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On motion of Mr. French the Association proceeded to the

#### ELECTION OF OFFICERS.

The following officers were elected by unanimous votes :

President, L. S. Drew, South Burlington, Vt.

Vice-President, Obadiah Brown, Providence, R. I.

“ B. C. Sears, Blooming Grove, N. Y.

“ H. R. C. Watson, New York, N. Y.

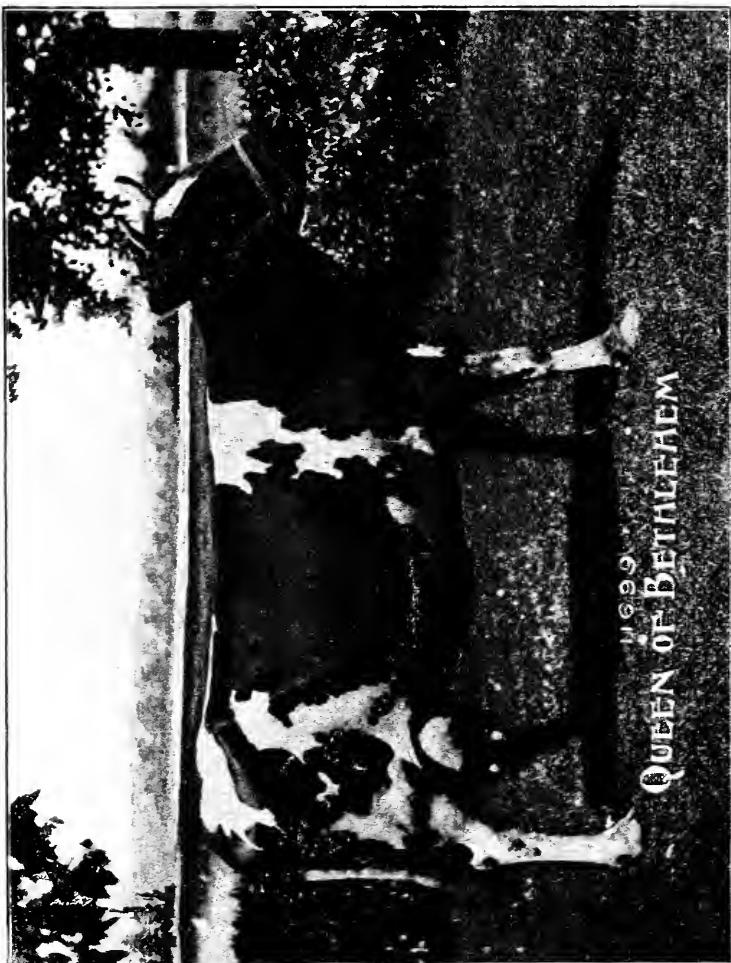
“ John Stewart, Elburn, Ill.

Secretary and Editor, C. M. Winslow, Brandon, Vt.

Treasurer, Henry E. Smith, Enfield, R. I.



THE TWINS; POMONA, 12756, ROMONA, 12757, AND THEIR CALVES.



QUEEN OF BETHLEHEM  
1929

Executive Committee for three years, Charles H. Hayes, Portsmouth, N. H., J. Andrew Casterline, Dover, N. J.

Executive Committee to fill unexpired term of the late John Bratton, John W. Scott, Austin, Minn.

Editing Committee, J. D. W. French, No. Andover, Mass., C. M. Winslow, Brandon, Vt.

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### NEW MEMBERS.

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The following names were proposed and duly elected as life members upon payment of the membership fee.

John W. Scott, Austin, Minn.

William Jay, Katonah, N. Y.

Newman E. Sears, Elmwood, Conn.

George Davidson, Fairfax, P. Q.

Howard Cook, Beloit, Ohio.

George W. Knowlton, West Upton, Mass.

Franklin Doane, Middletown, N. Y.

Edward Kemp, New York, N. Y.

E. A. Schouten, Cortland, N. Y.

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### EXPERT JUDGES.

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The following list for Expert Judges at Fairs for 1899, was approved and ordered sent to the leading Fair Associations of the United States.

Alonzo Libby, Westbrook, Maine.

Charles H. Hayes, Portsmouth, N. H.

George H. Yeaton, Dover, N. H.

W. R. Garvin, Dover, N. H.

L. S. Drew, Burlington, Vt.

F. W. Spalding, Poultney, Vt.

H. R. C. Watson, Brandon, Vt.

C. M. Winslow, Brandon, Vt.

J. D. W. French, No. Andover, Mass.

George A. Fletcher, Milton, Mass.

Obadiah Brown, Providence, R. I.  
 Henry E. Smith, Enfield, R. I.  
 H. S. Joslin, Mohegan, R. I.  
 Dudley Wells, Wethersfield, Conn.  
 S. M. Wells, Wethersfield, Conn.  
 J. H. Larned, Putnam, Conn.  
 B. C. Sears, Blooming Grove, N. Y.  
 George Taber, East Aurora, N. Y.  
 A. S. Tubbs, Mexico, N. Y.  
 C. S. Barney, Milford, N. Y.  
 Frank Converse, Woodville, N. Y.  
 J. D. Magie, Elizabeth, N. J.  
 William Lindsay, Elizabeth, N. J.  
 B. Luther Shimer, Bethlehem, Pa.  
 H. Hayward, State College, Pa.  
 J. P. Beatty, Pataskala, Ohio.  
 John Stewart, Elburn, Ill.  
 C. S. Plumb, Lafayette, Ind.  
 Frank A. Lovelock, Lynchburg, Va.

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#### AMENDMENT TO THE CONSTITUTION.

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THE SECRETARY—Since our Annual Meeting of last year I received a letter from the managers of the Omaha Exposition wishing some action of the Ayrshire Breeders' Association, and I had to reply to them that our Annual Meeting for the year had been held and that we had no provision in our Constitution for calling a special meeting, and it seemed to me well to call the attention of the Association to this fact, and it is recommended by the Executive Committee that our Association amend its Constitution as follows :

It is recommended by the Executive Committee that Article IV of the Constitution be amended by inserting after the words "for the ensuing year"—"Special meetings of the Association may be called by the President or by the Executive Committee or at the

written request of ten members. Twenty days notice must be given and the object of the meeting announced in the call, and no business, other than that specified in the call, shall be transacted at the special meeting. Time and place shall be determined in same way as Annual Meeting.

Also Article IX shall be amended by inserting the word "Annual" between the words "any" and "meeting," making it read—At any Annual Meeting of this Association.

Regulation IX. After the words "at time of entry" shall be inserted a clause, "The age limit of Imported animals shall be reckoned from date of their admission at the U. S. Custom House.

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THE SECRETARY—Mr. President and gentlemen : In explanation of this picture of the cow, Duchess of Smithfield, I would like to read this letter from Major Henry E. Alvord :

U. S. DEPARTMENT OF AGRICULTURE,  
BUREAU OF ANIMAL INDUSTRY, DAIRY DIVISION.

WASHINGTON, D. C., January 12, 1899.

C. M. Winslow Esq., Sec. Am. Ayrshire Breeders' Association, Brandon, Vt.

Dear Sir :

For some time this Department has had under consideration the practicability of getting up colored pictures of typical animals of the different breeds of live stock, without involving too much expense.

Lately we have hit upon a new three-color process of reproduction which costs not more than one-third as much as lithographing and promises to answer very well in some cases.

As an experiment we have had a portrait of the Ayrshire cow Duchess of Smithfield painted in oil by J. W. Hills of Ohio, the artist depending upon a good photograph by Schreiber for his likeness. Herewith I

send one copy of the print, taken at random from several thousand that we have, to show you the result. I would like very much to have you examine it and give me your opinion of it.

At first glance you will say that the color is wrong and gives the impression of a purple rather than a reddish-brown. But you must treat this print just as you would the oil painting from which it is reproduced. It must be set off at some distance and subjected to suitable light. And this being done I think you will find the effect much more satisfactory.

As far as the outline and detail is concerned, this process is much more accurate than lithography, because it is an exact photographic reproduction of the painting. Of course criticism of the latter may be in order. As to the process itself, the main question is whether by any combination of red, blue and yellow, we can attain satisfactory results.

At your convenience please tell me just what you think about this, and especially whether you think it is a sufficiently accurate portrait of this celebrated cow, and enough better than a black and white likeness, to be used by this Department in one of its publications.

And while writing, will you not kindly give me a little sketch of the cow herself? Where and by whom was she bred, when dropped, who were her successive owners and when and where did she die? Also how many generations was she removed from importation? And; where can I find a record of the dairy performances of the cow herself, or of other cows closely akin to her among ancestors or progeny?

I hope I am not troubling you too much in this matter, but I do not know where else to go for the information I want.

If you would like to have the original oil portrait from which this picture was made, to place on exhibition at the coming Annual Meeting of your Association

in New York, I will be pleased to loan it to you for that purpose, and will send it by express, prepaid, in such shape that you can return it, without expense, immediately after your meeting. All I shall ask in return will be that some competent person or persons would give us a written criticism of the picture, both as a likeness and from an artistic point of view.

Hoping you are well this winter, and with my best wishes, I am,

Very respectfully yours,

HENRY E. ALVORD,

Chief of Dairy Division,

This was from a photograph that I sent him in connection with a number of others at his request some time ago. I replied to that letter stating that Duchess of Smithfield was bred by Henry E. Smith of Enfield, R. I., sold to Mr. Watson of West Farms, N. Y., and was tested by the Association in a competitive test for a prize, and saying that I believed it was an accurate test, that she gave 426 1-2 lbs. of milk in seven days, and that Mr. Watson claimed he had made 19 lbs. 6 ozs. of butter from that milk; that she gave in that year on Mr. Watson's statement of the weight of the milk, 10,748 lbs. of milk; that she was seven removes from importation, and was from the "Hester" family that was established by the late Joseph F. Brown of Providence, R. I., and traced to Mary, 3661, imported from Scotland to Frederickton, N. B., by Robert Gray. Her descendants were sold to go to Maine, and from there to Rhode Island, and that I should be pleased if he would send the painting and we would try to appoint some one to send him a statement of what we thought of this work. Mr. Chairman, I would move that the Association appoint Mr. French, Mr. Smith and Mr. Brown a Committee to examine this painting and write Mr. Alvord. I would also move that if Mr. Watson comes in before the meeting adjourns, that he be added to the Committee.

MR. HENRY E. SMITH—I might be prejudiced in that matter.

THE SECRETARY—I think Mr. Smith is just the man to be on the Committee, because they want to know if that is a correct and perfect picture, and there is nobody so well qualified to judge of that as Mr. Smith who bred the animal, Mr. Brown and Mr. French who knew the cow.

Motion seconded and carried.

MR. WELLS—I would like to ask if it is always necessary to have the water color made first.

THE SECRETARY—I understand from this letter that it is a new process that costs much less than lithographing, and he claims in this letter, is more accurate and cheaper. I understand this picture is a reproduction of the painting.

MR. WELLS—As I understand it then, the accuracy of the picture depends entirely upon the skill of the artist.

THE SECRETARY—Mr. Chairman, we have present with us here today, by courtesy of good feeling, the President of the Jersey Cattle Club, Mr. Darling, and Mr. Fuller who is connected with the Jersey cattle interests, and I would like to present them to the Association. I take their coming here, as an act of courtesy. There has always been a good feeling between cream and milk. The Ayrshire cow and the Jersey cow have never been antagonistic.

MR. FRENCH—I move that we hear from the gentlemen who have favored us with their presence.

Seconded and carried.

MR. DARLING—I am very pleased to accept your invitation to be present at this meeting, and, as a representative of the American Jersey Cattle Club, I wish to say that there is a very good feeling between us, and in return for the invitation to be present here I would, on behalf of the Club, ask you all to be present at our meeting which occurs the first Wednesday in May.

Mr. Fuller here is the ornamental member, and I presume he can say something that will entertain you.

MR. FULLER—I do not know that I can add anything to what my worthy brother has said, except to give voice in stronger terms than he my expression of the pleasure it gives me to be among breeders of dairy cattle. We are all aiming at the same object—the improvement and good of the country—by introducing a better breed which we believe will help the farmers and dairy interests of this country. You, in your wisdom, believe the Ayrshire the proper breed; we, in our wisdom, think the Jersey is the proper one. We are all aiming at the same object. We introduced into this country a breed for the dairy farm and the farmers of the country, the best that our wisdom and fair judgement can produce. We all desire the improvement of the dairy breed of the country, and on behalf of the Jersey Cattle Club I wish you every success in the noble work which your Association is doing.

MR. SEARS—I would like to say from actual experience that there is no better cross of cattle in the world than the Jersey and the Ayrshire breeds. The blood seems to mingle very nicely, and to bring about good results. I think there must be some real affinity between these breeds.

MR. WELLS—For the best results, I would like to ask on which side should the male be?

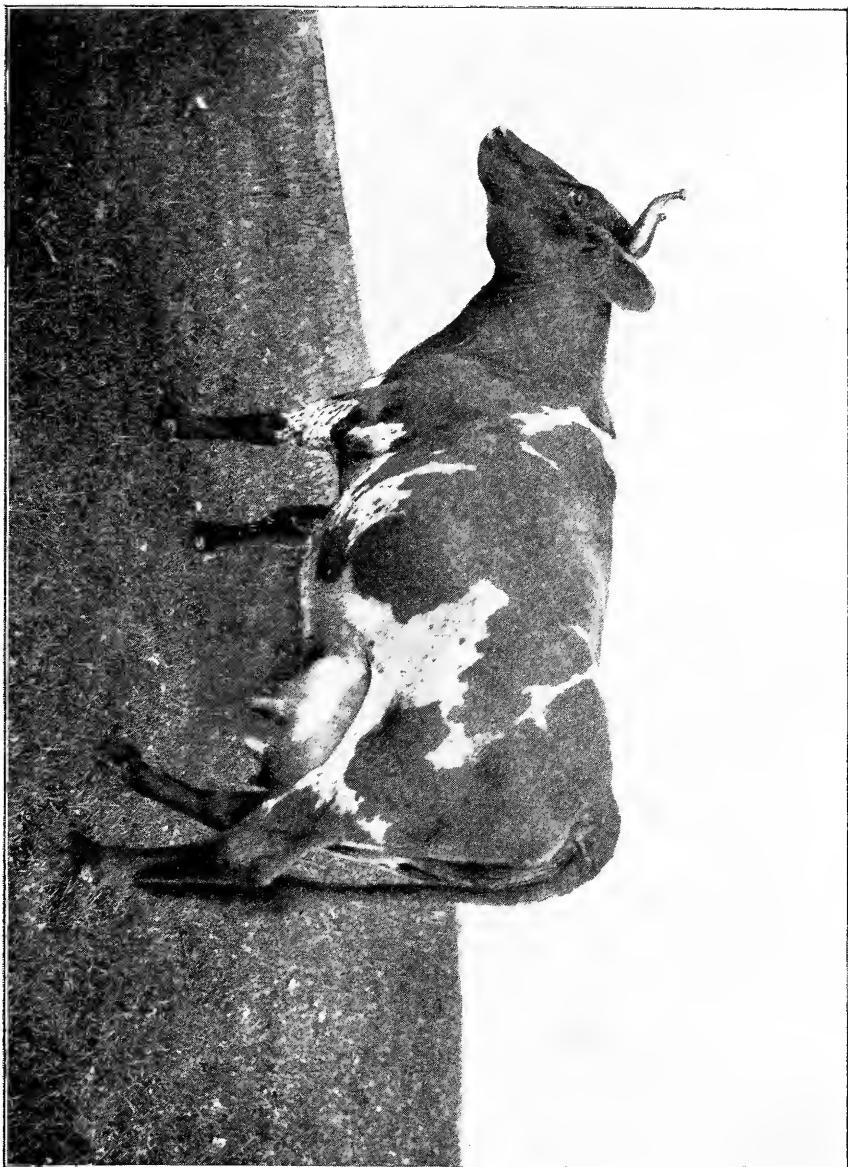
MR. SEARS—Generally on the Ayrshire.

THE SECRETARY—I have a report here of private tests of herds which will appear in the report of this meeting, and it shows that very few of the Ayrshire men keep continuous and careful records. We brought this up with a view of encouraging the breeders to keep stable records by weighing the milk and by testing with the Babcock test. The trouble with the Ayrshire cow is not that she is not a good cow, but that nobody knows it. There are very few breeders in this country

who test their cows or weigh the milk. The majority say that they have such a number of cows but never make any tests. I hope the time will come when the dairy individuality of the best Ayrshire cows will be better known, so that a breeder who wishes to improve the dairy quality of his herd can do it understandingly by selections of bulls from cows with authenticated records. There are but very few breeders of Ayrshires who know either the quantity or quality of the milk from their cows.

DR. TURNBULL—I am very glad to be here. I am a member of the Association and a young breeder. About thirteen months ago I started out to get a few cattle. I knew absolutely nothing about cattle, except that there were cows,—red cows, black cows and yellow cows. I had a small place in the country. I had on the place a couple of Shorthorn cows of strictly dairy type, remarkably good too, persistent milkers, large producers with an average butter fat of 4 7-10 per cent. I looked around for another breed of cattle which would suit the purpose—I wanted them for the retail milk trade, and I heard something about Ayrshire cattle; but when I came to inquire I found almost nothing. No advertisements, no literature. I managed to get hold of one or two English works which mentioned Ayrshire cattle. I made inquiries elsewhere and finally I managed to come across some breeders, and to, make a long story short, I purchased some Ayrshires, and was very much pleased with them. I purchased some more, and have continued purchasing until today, with my original purchase, the first of which was made one year ago today, I have about thirty-eight head of Ayrshire cattle. For the last nine months now we have been making frequent tests. I had the State Experiment Station send a man down who made a week's test of eleven head. They ran over 4 per cent. butter fat, the total solids ran over 13 per cent. That was just what I wanted—a milk in good quantity

GIPSY OF BROOKSIDE. 11265.





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running 4 per cent. of butter with 13 per cent. total solids. Since then I have been asking every breeder I met how often he tested. Very few of them have tested at all; some have relied on the creameries for their tests. Some said, "we never test. We do not know the per cent. butter fat, I think I have only come across four breeders who have tested their herds and they have all been 4 per cent. fat. Now we have a cow of the dairy type,—recognized dairy type. I was so glad when our friends the Jersey breeders said they were breeders of dairy cattle. We are, but we should tell the public what we have. If we do not, we can go on breeding, and we will be standing just where we are. In order to breed a better thing then, we must know what we have. You might get a cow of remarkably fine type, and she might only give 3 3-10 per cent. milk. If you are out for the business end of it, if you are in the business for dairy cattle, you have got to take the cows with the highest production of fat contents, and you have got to breed from them. You have got to keep records of the milk and make frequent tests. On my farm we weigh every drop of milk every day. We make daily tests of the whole herd and two monthly tests of each individual cow. We know what we have. I went out knowing nothing at all about Ayrshire cattle, but I have twenty head that I am milking now that will average on the daily tests over 4 per cent. butter fat. Now if we advertise and let people know what we have, we can boom the herd and we can make sales. Inquiries are coming in from all directions from men who want to find out more about Ayrshires. You have heard the letter which I sent to the Secretary, and the one from the National Stock Farm. Now we ought to advertise and keep records and advertise the records to let the people know what we have. The report of the tests of Mr. L. S. Drew's herd shows that we have a strictly dairy type of cattle, and it is just such matter as shows,

convinces and sells. I was up in Toronto at the exposition last fall. It was a magnificent show of Ayrshires up there,—nine herds exhibited—but there was not one breeder there who knew the fat contents of his herd. They would say, "Yes they are big producers." "Well, what per cent. butter fat?" "Don't know, probably about 4 per cent." Now that "about 4 per cent." has been handed down from generation to generation. We can show it and the only thing that will show it is daily or monthly tests. Then we can go before the public and say, we have a strictly dairy type of cattle and this is what we are doing. But I do not think the members of the Association are advertising nearly enough. I have inquiry after inquiry : "Can you sell me so-and-so. If not, do you know who has them for sale?" I wrote to the Secretary that it might be a good thing to have a kind of clearing house. We have not all enough cattle to fill an order. I know an officer today of an Institution in Pennsylvania who wants to bid on seven head of Ayrshire cattle. They are hesitating whether they want Holsteins or Ayrshires. I have written some breeders asking them if they had the seven head for this inquiry. I have not come across one who has. But if we had a clearing house, where we could put in every month the cattle we had to sell, or what we are willing to sell, they could advertise that they had the Ayrshire cattle continually on sale and that they were the authorized sales agents of the Association. If that could be done, it would reduce the cost. Say each member put in five cows, or he could report monthly what he has for sale. It would make but a little herd to be organized at first, but it could be done ; and it is either that, or each man advertising for himself if he has any—knowing what he has. I have inquiries quite frequently asking me what my herd produces, what is the average production, and when we can advertise that, then we can answer these inquiries better. I will say for myself,

that in the advertisements which I have put in all the Dairymen, I have put in the official State test of my herd and it has brought me a great many inquiries. I have had inquiries for Ayrshires from the Atlantic to the Pacific and from Northern New York to the Gulf of Mexico.

MR. WELLS—I have an abundance of correspondence from people who are inquiring about Ayrshires and wanting to buy much cheaper than I can afford to sell, and they write me that they have been offered herds for \$30 to \$35 and less, but I do not care to sell at these prices. It is hard work to keep up my own herd and it is not necessary to advertise much. If I get a little overstocked, five or six lines two weeks in the *Country Gentleman* will bring me all the orders I want. I appreciate the necessity of having tests made of the milk frequently. My herd has been tested now for the last year every month and have averaged over 4 per cent for six months and over 13 per cent of solids. I do not make a large record of milk. It is quality I am after. I know many of the herds in Canada and some of them I know give a very high standard of tests and butter fat. I have seen them tested and I know some of them go as high as 4 8-10 per cent. butter fat, and many of the animals in Canada average, I think, a larger yield than ours.

THE SECRETARY—Of course every one wants to buy a good thing as cheap as possible, but I think the buyers who will stop buying Ayrshires because a fair price is asked are not desirable customers. I received a letter from St. Paul, Minn., last year from Mr. James J. Hill, asking me if I could send him a carload of Ayrshires from my herd and what they would cost. I wrote him I could not spare a carload but I thought he could get a carload from breeders in New England. He had bought a carload of cattle from Canada and wanted a carload from New England and sent an agent to

Dover and Portsmouth to look but did not close a trade, and wrote me again in the spring asking if I would go and look at the cattle his agent had looked at and buy them. He thought he ought to pay about \$75 per head. I looked at the \$75 cattle, and also at some others, and found the cattle I should feel satisfied to ship to the West would cost more than \$75 a head, that I would have to pay \$200 a head for some that I should be satisfied to send to the West and stand side by side in competition with his Canada cattle. I wired him what they would cost him. Should I buy or go home? He wired back "Buy as low as you can." I paid all the way from \$75 for two-year olds up to \$200 for some very choice Ayrshires and shipped them, and I understood afterwards, that when placed side by side with the Canadian herd they were the best and cheapest cattle he had bought. Now I do not believe much in low priced cattle. If a man comes into your stable and wants to buy low priced cattle, sell them to him if you wish, but there are men who appreciate a good thing, and there are men who want to buy good stock and will pay a fair price, and that is the kind that Dr. Turnbull wants to have come to his herd, that is the kind I want to have come to my own herd and the kind Mr. Wells wants to have come to his, and I think, from the remarks I have heard all around, that this kind of cattle are scarce and buyers are plenty. I have no trouble in getting a good fair price for a good animal, and I think all breeders will tell you the same, and the best are the cheapest. There are plenty of men who, when they start a herd, want to start from the best and are willing to pay a fair price. Of what consequence is a difference of \$5, \$10, \$100, or \$500, between choice animals and ordinary ones in laying the foundation of a herd for a lifetime. It does not count for much when divided through all that time with all the stock

you breed. We must start at the top to get anywhere. People do not live today to be as old as Methusalah. If a man today could be guaranteed 999 years of life, he could perhaps, start at the bottom and he might live long enough to get to the top. But I tell you today, in these days of electricity he must start at the top and do quick work and do it hastily in order to get anywhere, and if a man wants to buy such stock he has to pay for it. When I started my herd, twenty-five years ago, I selected the best I could find and have always bred as well as I could from the best I could find. I have bred for the very best qualities. I believe the breeders who are testing their cattle for 4 per cent. butter fat and 13 per cent. solids need not sell anything for \$35 or \$40. If a man will show a customer in a way that will satisfy him he is telling the truth, that he has a cow that will give 4 per cent. butter fat and 13 per cent. solids and 12,000 lbs. of milk per year, he will give his price for her calf because he wants it and cannot afford to do without it. There are very few men who are doing it, but the few men will make money.

MR. SEARS—I am sorry the Secretary does not know where those men are. I wanted specially to raise cows for them.

MR. WELLS—In starting my herd I paid \$400 apiece for two heifers, I paid \$1,350 for a cow and two calves in Canada, and they are really the only animals I ever made any money on.

MR. FRENCH—I move that the salary of the Secretary be made the same as last year.

THE SECRETARY—Mr. Chairman; I appreciate your kindness, and as long as the Association was laboring along in difficulty, I was satisfied to throw in a good deal of time—it takes about all my time as there is a large correspondence connected with it outside the recording, and there is a good deal more work to do than there was when I accepted the office. I paid over to the

Treasurer \$600 the other day besides paying all the expenses of the office. I leave it in your hands whether I shall be paid \$400 or \$500.

MR. FRENCH—I should be glad to amend the motion and make it \$500. I think the Secretary is worth it and more too.

Motion seconded and carried.

THE SECRETARY—I thank you, gentlemen, and Mr. President, and gentlemen, if you will give me more straw I will make brick; but I tell you it is hard work to make brick without straw. Mr. French understands that. We have worked together, and it is hard to work up a new thing over and over again. If you will give us something to work on, we will boom the Ayrshires. There is no question about it.

MR. SEARS—I think it devolves upon any and every one who has any record to send it in to Mr. Winslow and let him earn this extra \$100.

MR. FRENCH—I would like to ask the Secretary when the new Herd Book comes out.

THE SECRETARY—It should have been out now, but I had to go into the hospital for an operation and was laid up afterwards for about a month, but the Herd Book is on the way. It is in the hands of the printer and about one hundred and fifty pages are ready. It will be out in a very short time now.

THE PRESIDENT—Is there any other business, gentlemen?

THE SECRETARY—The Executive Committee will please meet immediately after the adjournment.

MR. SEARS—Mr. Winslow has prepared a paper at considerable trouble, and perhaps he would like to read it. Anyway, the members would like to hear it.

THE SECRETARY—It will go into the report and the gentlemen can read it there.

Moved and seconded that the paper be read.

## BREEDING AYRSHIRES.

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FOR THE SHOW-RING AND THE DAIRY.

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There is such a marked difference between the Scotch type of lately-bred Ayrshire and the home-grown in the United States that it raises a serious question—whether breeders shall cling to the Scotch type and scale of points or ignore both and breed for the most profitable dairy cow, regardless of exterior form and Scotch type of excellence.

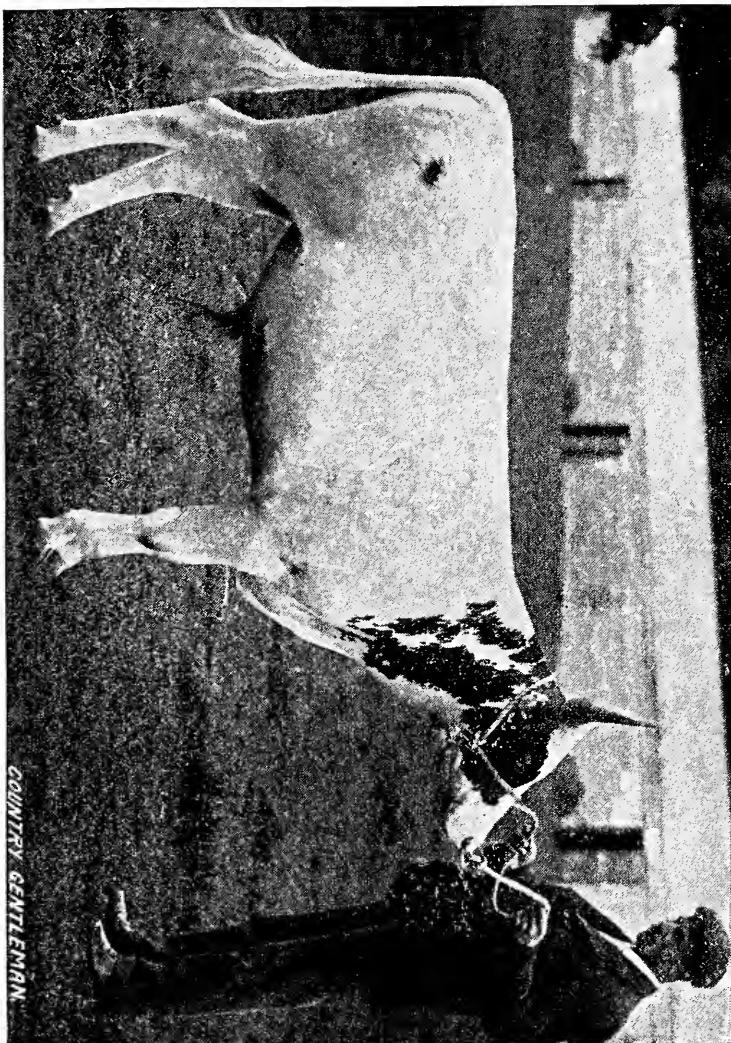
An observer who visits the fairs of the United States, Canada and Scotland cannot but notice the difference in the style of the Ayrshires exhibited. At first sight, it would seem as though the breeders of Canada had ignored the dairy quality and the breeders of the United States the form of the Ayrshire, for looks count for much in the Canadian and Scotch rings and the handling of a cow leads in the judging in the United States; and they appear to be diverging more and more.

Judging from the cuts in a late issue of the *Country Gentleman*, and the quotations made, it would seem that style and looks count for everything in the show-ring in Scotland. The accompanying cuts represent popular types of Ayrshires in Scotland.

Mr. Peer says:—I shall not attempt to describe in detail these most beautiful cattle. The photographs here reproduced, will give the reader some idea of what an up-to-date Scotch Ayrshire—of either sex—is like. The bull, Bend d'Or, is a champion yearling, and winner of seven first prizes in 1898. He was bred and exhibited this year by Mr. James Howie, Hillhouse, Kilmarnock; he was sired by White Cockade. The heifer, Orange Blossom of Hillhouse, bred by D. & J. Wardrope of Old Cunnock; sire Blood-for-ever. She is now owned by Mr. James Howie, and as exhibited by him in 1898 won seven first

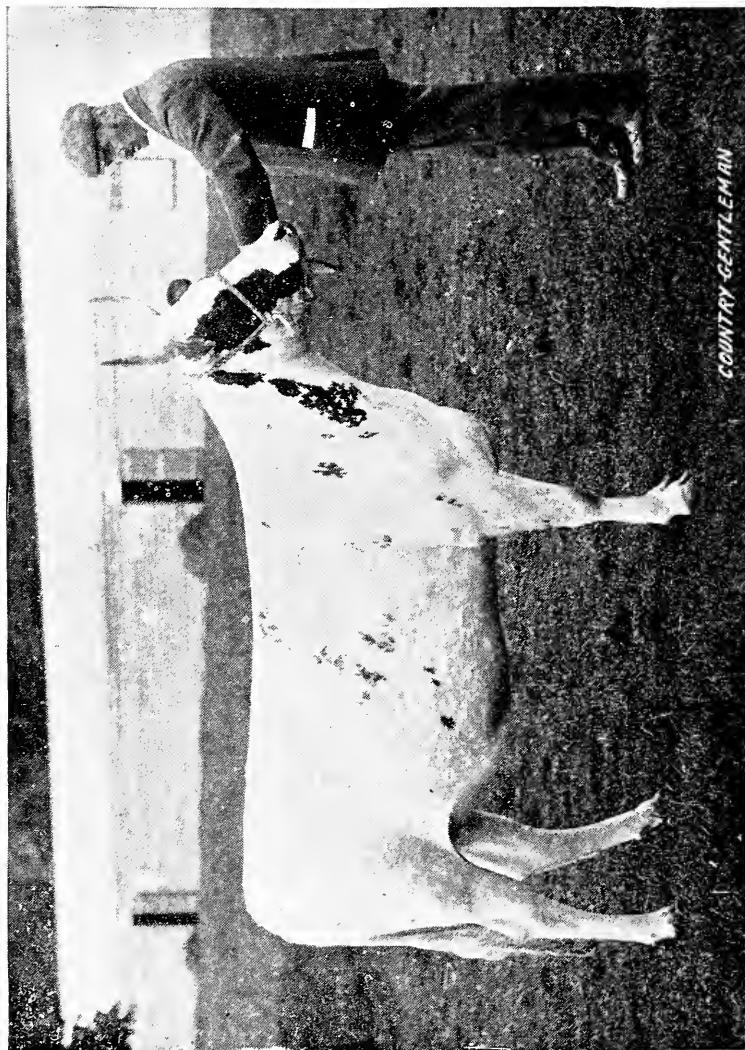
and two second prizes. I may say however, that all Ayrshires do not show as much white, although white is the predominating color, and this with large red or dark red spots or splashes on the barrel, with the sides of the face shading to brown, is about the correct thing. The attractiveness of these particular colors or markings is not striking perhaps in a single animal at halter in a barnyard, but when seen in numbers on a green pasture, they are very beautiful. The distinctive features of an Ayrshire's conformation is first of all their most perfect shaped udders. They have not only grand fore and hind udders, but the breadth of the vessel is very great. I saw a cow that had lately calved at Mr. James Howie's that could hardly manage to get her hind legs forward in walking, and the hoofs of her hind feet when standing squarely were at least 24 inches apart. Nor was this all; the udder was carried well forward, more than half way to the navel, and well up behind. The bottom of the udder was perfectly level (no depressions between the quarters) and the teats were placed an equal distance apart each way. I may say the Scotchmen have discovered their mistake, and are now breeding for greater length of teats than ever before.

Another marked characteristic of the Ayrshire family, as bred in Scotland, is their carriage; a point to which American, and *even Canadian breeders*, have given too little attention. The Scotch have paid great attention to this point; and not only to this point in the animal while standing, but she must have a graceful carriage in walking. The want of this has lost many a good cow a prize of late years in Scotland. No cow can have a graceful, dignified carriage that is ewe-necked. It looks as badly as a fine, big soldier with round shoulders. As Mr. Howie says, "Sa must have the walk o' a queen, or ye ma let her ga awa bock hame." This shows to what a high state of perfection the show cattle



THE CHAMPION YEARLING BULL, BEND D'OR.

COUNTRY GENTLEMAN.



*COUNTRY GENTLEMAN*

THE HEIFER, ORANGE BLOSSOM, OF HILLHOME.

in Ayrshire have attained, when the question of which cow walks most gracefully decides the winner of a champion cup prize, worth \$250. Speaking of a cow carrying her head too low, Mr. Howie said, "Tha's a thing A canna forgive in an Ayrshire coo!"

Mr. Howie led out a few young things he was fitting for the Christmastide show. They came from their stalls in the finest fettle and as fit as could be. Their coats glistened in the sun like a new silk hat; the hair had been clipped from their necks and shoulders, the better to exhibit the beauty of their form; the horns were beautifully polished, and their coats and skins as clean as soap and water could make them. A brush and comb from the house had been called into use to part the hair straight along the back and to brush all stray locks into order. This was a fortnight before the show, and such style and carriage! As Mr. Howie expressed it, "Such a queenly way of going! A dinna ken, but am thinking they look as if they were trying to sell themselves." They looked at me as if they thought I was the judge and they were showing off.

When we had left the stable and were driving along I asked: "What did you think of such a cow?" describing a very beautiful one in which I noticed my conductor did not seem to take much interest. My host answered: "Yon is a bonnie quay [heifer,] mind ye, bit A dinna jist warm to her, sa is a wee ta muckle doon in the neck and tha' awkward tha' sa canna walk for a rood. Neither could her mither oor her granny ither; A ken tha booth" (I knew them both.)

While the Ayrshire is unquestionably a dairy cow, and the chief point of excellence should be her ability to convert the roughage of the farm into dairy products, can the breeder couple such animals as will secure the largest dairy yield from a typical Ayrshire form, as regulated by this scale of points, for this breed of cattle? Is it possible to push the typical Ayrshire cow that will

scale close to one hundred points, to the front rank as a phenomenal dairy cow? Can the highest type of both be combined in one cow, or must the breeder who wishes to breed a cow that will produce 12,000 lbs. of milk and 500 lbs. of butter in a year, sacrifice something of the perfection of form to secure the dairy yield?

This is an important subject, especially when the Ayrshire Breeders' Association has both laid down a rule to guide in exterior form, and is at the same time using every effort to push the Ayrshire cow to the front in dairy yield. I do not mean—Can the highest excellence in both be easily attained? But can they be attained at all? If a thing can be accomplished once, it may again. If with any amount of labor, thought or expense it can be accomplished, then the scale of points is right and the action of the Association in pushing for dairy ability is right also; but if this combination cannot be attained in the same cow, then the scale of points should be changed, for a dairy cow is for use and not for ornament.

It is for this Association to lay down the attainable type, and for the breeders to mould their cattle after it. For his encouragement, the breeder has the general law of heredity that like begets like; it may be of the immediate ancestry, or more remote. Also, he has the fact for his support that the more lines of perfection lie back of his breeding animals, the more likely he is to obtain perfection in the offspring. Moreover, he will find that when he pushes his breeding in any one line, he may have many failures; but there is always the hope of some animals shooting ahead, yielding to the brain power that is behind and pushing steadily in one direction; for the man of brain is the controlling power of nature and the world.

However definite the breeder's ideal, or however painstaking he is to reach it, he is amply rewarded if he can see but a little general improvement, and he

may take heart and be greatly rejoiced if he ever during his lifetime produces even one animal that approaches his ideal. I believe the scale of points is right ; and I also believe the highest perfection of dairy yield may be obtained from a perfect cow as determined by that scale of points. But it cannot be done by a careless breeder, or without the greatest outlay of thought and money ; for it is perfection, and means the retention of all that is good in a cow, and the elimination of all that is bad. If you go into almost any careful breeder's herd, you will find one or more cows that show perfection in some point, and some herds will show perfection in many points.

Of course the first point to lay down for perfection is the actual yield of milk and butter, and whatever else is sacrificed, this must be retained always, and built up by every means available. Constitution must back up this dairy prominence, or it amounts to little. With dairy yield and constitution, one will naturally have as a sequence the small head, the thin shoulders, the large barrel with arched ribs, the capacious udder, large milk veins and holes.

The breeder has then a good dairy cow, and he must hold on to that and add to it, and then polish her up with what might be called the non-essentials. The udder must be shaped to a proper form, bred up behind and out in front and on the sides, until the cow can hardly walk when it is full. The sole of the udder must be brought down to a level, and the teats moved to the four corners of the udder. In doing all this, you will probably have shortened the teats so that it will trouble you to obtain the amount of milk your new cow will give, and you must breed them longer and still hold all you have got. Then you must square up the rump, and carry out the tail so that it will drop off suddenly at right angles. All this time you must watch the loin, to keep up the strength of your machine. After

you have done all this, you may give her some small upright horns, and place a broad Flanders escutcheon on your cow, and you may give her any combination of red, brown and white, except a roan ; and you will have attained your object—a perfect Ayrshire cow.

Now to do all this a man cannot stay at home and work up perfection out of his own herd. Nor can he send to some noted breeder and buy a bull calf at random in the hope of its nicking with its own herd and intensifying the good qualities and eliminating the defects ; but he should have the ideal type so firmly fixed in his own mind that he knows clearly what his best cows lack in making them perfect, and he should find a bull that will build up the point that is most lacking in his most perfect cow, bearing in mind the dairy quality always, so as to keep that on the increase, or at least not to go backward. Sometimes he will need a bull strong in one of the minor points and sometimes in another ; and after all his pains and troubles he may find he made a mistake in the use of the most carefully selected bull, because of some preponderance of strong blood that swerves the offspring out of the line he hoped for, and he has to try again.

In order to do all this, it is necessary for the breeder personally to inspect the dam and her relations, as far as he can, of the bull he proposes to use in his herd ; and the higher he reaches in his attempts for perfection, the more necessary the personal knowledge of the ancestry of the proposed addition to his herd. He should not wait until he needs a bull, but should plan ahead and be on the lookout for just what he is likely to need in the near future, and have the dam of a future bull in his mind ; and he may, by a little advice, manage to have her coupled so as still more to aid him in obtaining what he needs. No one bull will be suitable for all the herd ; but if the breeder is not situated so that

he can keep more than one, he can breed the top of his herd right and let the other end take care of itself.

One very important help in all this is always to keep the best animals you raise, and weed out the poorest. There is always a market for the poorest, either to the butcher or the city milkman. In my own herd, if a cow does not suit me or come up to my standard of excellence, I can always sell her as a new milch cow, to go to Brighton. The drovers are glad to get them, and will pay me the highest market price for a fancy cow and let me keep her calf and her pedigree; and she goes to market as a common cow.

And here let me say that one great help to successful breeding is truthfulness and honesty in the other breeder; for your best-laid plains may be all thwarted by a willful misrepresentation made for the purpose of insuring a sale; and you, relying on his truthfulness, do not breed as you think you are doing. A man in selling breeding stock should try to have good stock to sell, and should then tell the weak points or defects in his stock, if requested by the purchaser. A breeder never loses in the end; for a reliable, honest, truthful breeder can always find sale for his stock, because he will be the more careful to have good stock, and his sales will give satisfaction to his customers, and they will speak a good word both for him and his stock and will come again to buy.

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MR. FRENCH—If there is no other business, Mr. Chairman, I wish to say that during the year past we have lost a notable member of the Association, Dr. E. Lewis Sturtevant, of South Framingham, Mass. He was one of the early importers and breeders of Ayrshire cattle. He wrote a book on the early history of Ayrshire cattle and of the importations into this country, and it is the best book we have on these subjects. He was, with his brother, the editor of the *North American*

Ayrshire Register, which in some sense was a rival to our own book and started at about the same time. We regretted at that time that he should have been separated from us. He felt, however, that he was in the right, but after the publication of four volumes, the two books were, by agreement, amalgamated so that thereafter one herd book was published, "The Ayrshire Record." During his life time he did good work in promoting the interests of the Ayrshire cattle both by his writings and by his example in breeding.

MR. SEARS—I think we owe to Dr. Sturtevant a debt of gratitude in this sense, in that he raised our standard of registry. Errors had crept in which he put an end to. I move that Mr. French be a Committee to get up a minute which shall go into our records, of the death of Dr. Sturtevant. I think his name has been so closely connected with the Association that we will be honoring ourselves by honoring him.

MR. FRENCH—I stated that Mr. Smith had been Treasurer since our organization. I had forgotten at the moment that Mr. Joseph F. Brown was the first Treasurer. I wish to make that correction. If there is no other business, I move that the Annual meeting be adjourned and that there be a meeting of the Executive Committee for a short time.

Motion seconded and carried.

Meeting adjourned at 5.30 P. M.

## THE AYRSHIRE BREED AND SOME HISTORY CONNECTED THEREWITH.

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J. D. W. FRENCH, N. ANDOVER, MASS.

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It is a curious and wonderful fact that, with only two original species, the *Bos urus* or *primigenius* and the *Bos longifrons*, as appears by the early history of Great Britain, so great deviations should have taken place as to result, according to Low, in some nineteen distinct breeds,—this would include the Irish breeds. Importations of cattle of the *urus* species from the Continent undoubtedly caused some variations, for the reason that they probably differed in some respects from the native species. The fact still remains, however, that in a country of comparatively limited extent nineteen distinct breeds originated. The present magnificent breeds of Great Britain clearly indicate that there was indeed a survival of the fittest; caused by natural selection, or by the skill of the early breeders, or by both, assisted greatly by the isolation and non-intercourse between the various sections of the country, owing to the great difficulties of traveling far over roads—where they existed at all—of the most wretched character and almost impassible.

The same causes must have governed the breeding of sheep, of which there are also many noble breeds in Great Britain.

“The county of Ayr, stretching along the estuary of the Clyde and the Irish Sea for about eighty miles, consists in part of moory hills, in part of an undulating surface of common clay intersected by narrow vales, and in part of a flat tract nearer the coast, bounded towards the sea by a belt of barren sand. The climate is moist but not intemperate, although the country, like that of all the western shores of Scotland, is too much exposed to the continued winds and humid vapors of the Atlantic.

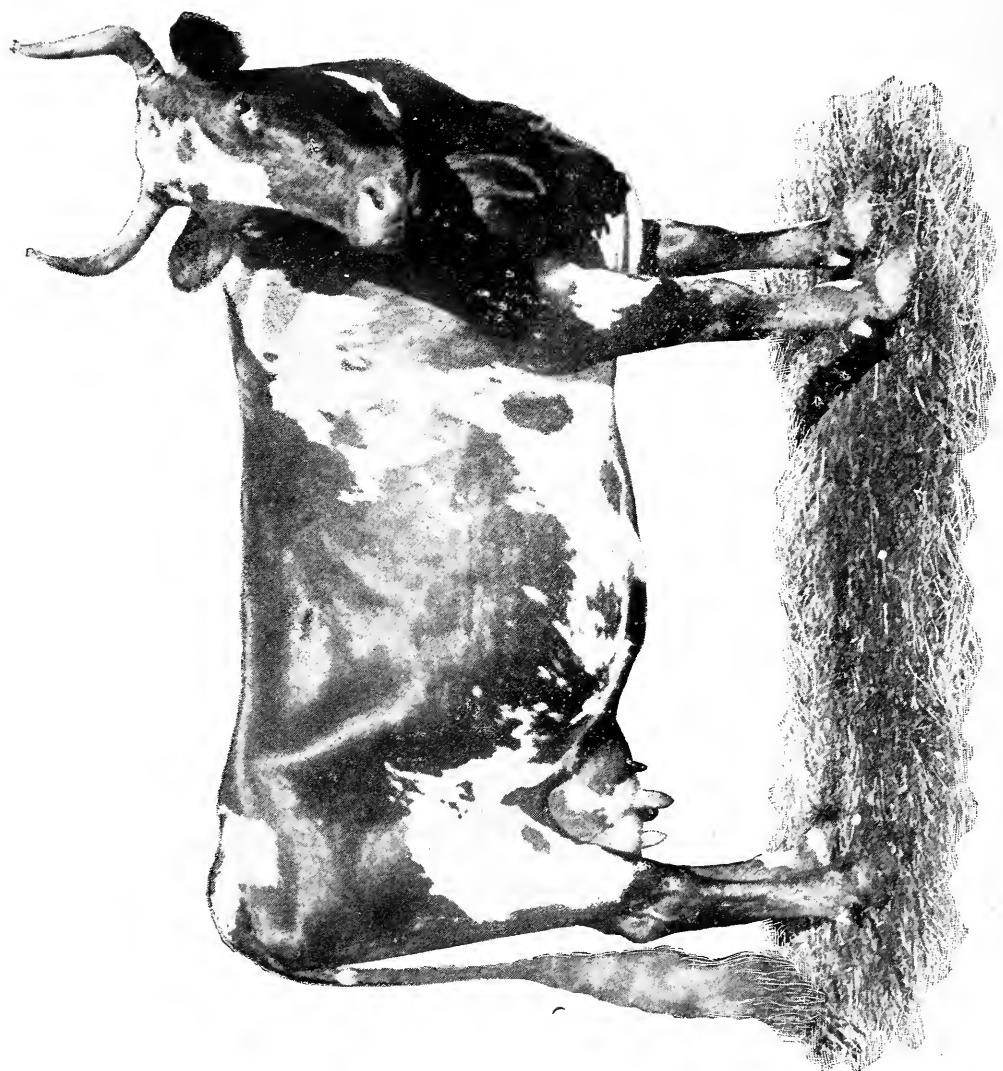
It contains fertile tracts, and presents to the eye picturesque scenery ; but throughout it is only of very moderate fertility and exhibits a far different aspect from those rich and verdant plains of the Severn and Avon, of the Trent and the Cam, where the largest cattle in Europe can be reared and the richest productions of the dairy obtained. Its condition at the middle of the last century and long afterwards is thus described by an eye-witness. There was hardly, says Col. Fullarton, in his Survey of Ayrshire, a practicable road in the country. The farmhouses were mere hovels, built with clay, having a fireplace in the middle, with an open space for the escape of smoke. There were no fallows, no green crops, no sown grasses, no carts or wagons, no straw yards. Hardly an esculent root was raised, nor indeed any garden vegetables beyond some Scotch greens, which, with milk and oatmeal, formed the diet of the people. The cattle, being starved in winter, were hardly able to rise without assistance in spring, and were never in fit condition for market. Such was the condition, not of Ayrshire alone, but of a great part of Scotland during half the reign of George III, and down to the times which men yet living can remember.”

So wrote David Low in 1842.

The country, thus described, was the birthplace of the Ayrshire breed of cattle. It was near the town of Ayr that Robert Burns, the plowman poet was born. It is related, when he occupied a farm near the city of Dumfries, that, “not content with the Galloway breed, he introduced some of the West-Country cows, which he thought would produce more milk.” In the poet’s published correspondence, allusion is made, in a letter, dated 13 November, 1788, to a heifer which had been presented to him by the proprietor of Dunlop House as “the finest quey in Ayrshire.” Sanford Howard states that in 1858 he had several interviews with the late Mrs. Begg, the poet’s sister, when she said that her brother,



DAISIE BRUCE. 5631.



CLIO ROSE. 7525.

during his occupancy of the farm of Ellisland, near Dumfries, kept a dairy and made considerable quantities of cheese. "Thus his efforts to procure Ayrshire cows shows that they had, even at that time, a high reputation for this object."

The present Ayrshire breed of cattle, like the improved Shorthorn, originated without doubt from various crosses, but there is great uncertainty about the early history of these crosses. Besides a cross of the West Highland breed, which is seen in the so-called Swinley type, there appears to have been an earlier cross of the Teeswater or Dutch breed, and perhaps also of the Alderney or Channel Island breeds.

Whatever part these various breeds may have had in the origin of the Ayrshire breed, it is certain that much credit is due the farmers of Ayrshire in their selection and use of the material which has resulted in the formation of so useful a breed.

Somewhere about 1780 came an era of awakening. With improved methods of agriculture (drill husbandry having been introduced a few years before,) began also the most marked improvements in the breeding of Ayrshire cattle. The Highland Agricultural Society was instituted in 1784. It is of interest to know that in the same year, 1780, Charles Collins and his brother Robert began to improve the Shorthorn breed,—with what results can be judged by the famous sale of Charles Collin's herd in 1810, when the noted bull "Comet" brought one thousand guineas.

In Aiton's History of the Ayrshire Breed in 1815, are given some illustrations of an Ayrshire cow and bull, which show what you might call a decided Shorthorn type, showing, apparently, that both breeds were largely indebted to the same source, the "Teeswater," for improvements. The Teeswater breed (the name derived from the River Tees in the North of England) was formed by crossing with cattle imported from Hol-

land ; but these cattle must have been different in many respects from the present black-and-white Dutch breed. Paul Potter's bull, one of the most celebrated paintings in the world, now at the Hague, painted before 1654, gives no idea of the present Dutch breed ; neither do you often find in the paintings of the old Dutch artists black-and-white cattle, which tends to show that the same processes of change and development in the cattle have been going on in Holland, as well as Great Britain.

John Dunlop, of Dunlop in Cunningham, Ayr, at an early date became noted as a breeder of fine cows giving large quantities of rich milk. Theophilus Parton, of Swinley farm near Dalry, Ayrshire, is said to have been among the first to infuse a strain of the West Highland blood with the Ayrshire cattle.

The first importation of Ayrshire cattle to Massachusetts took place as early as 1837 ; and since that date many other importations have come to this country at various times. The careful selection and breeding from these importations has resulted in establishing the breed in this country equal in every respect to that of Scotland. I can bear testimony to the truth of this from my observations on both sides of the Atlantic.

It is important to direct attention to what may be called the environment of the breed. Consider carefully the fact that here is a breed which has been bred for more than a century in a country with climate and soil similar to our own.

Now, under these circumstances, can anyone doubt that Ayrshire cattle are better adapted, from their natural surroundings where they have been so long bred, for the average farm of New England, with its often cold, bleak weather and scanty pasture and feed, than a breed bred perhaps for centuries, also, in a country dissimilar in many respects to New England ? Should not the daily adaptation of a breed for a hundred

years to its surroundings—and those very like our own—count for something in the selection of a breed for our farms? Another thing to be considered, looking to the future development, is that it is better to breed from animals rather under than over the capacity of the soil; for, with the natural improvement of the land, the cattle must improve also, whereas a contrary course would be likely to cause retrogression. Every good farmer wants to see improvement and has that in mind, whether breeding cattle or tilling the soil.

From its lowly origin in the county of Ayr, the Ayrshire breed may now be found in almost every country of the world. Even Holland does not disdain to import Ayrshire cows; and in Australia and New Zealand, they are the favored dairy animals. They are also found in Japan.

A scale of points is necessary in judging specimens of a breed; but the strongest points in a dairy breed are illustrated by the milk pail and churn. In 1880, Prof. Sheldon, author of "Dairy Farming," said of the Ayrshires: "They are wonderful milkers, doing well in milk, where most breeds would hardly live,—more completely than most if not all other breeds, they possess the property of converting into milk the elements of food. They are hardy enough to stand severe climates, while they have the faculty of quickly adapting themselves to altered conditions. A careful examination of the milk of different families of Ayrshires would seem to indicate that the breed might be divided into two classes—the one for butter and the other for cheese. The milk of one of these types has butter globules scarcely inferior to those of Jersey milk, though they vary much more in size; while the globules in the milk of the other are much smaller and more numerous. The former represents the butter and the latter the cheese type of the Ayrshire cow.

In classifying the different dairy breeds, he places

the Ayrshire first for milk and cheese. In Scotland, nine to twelve quarts of milk is estimated to a pound of butter, and five hundred to six hundred pounds of cheese is an average yield for a cow. In this country, the Ayrshire cow has been bred more for milk than for butter and consequently the butter qualities have not been developed as might easily have been done. Had more attention been paid to increasing and developing these butter qualities, a strain of Ayrshires might have been bred superior in many respects to the Channel Island cattle; and the proof of this may be found in not a few instances of large butter yields and in the presence of a large percentage of butter fat in the milk.

The Royal Agricultural Society Journal of 1868 gives the record of an Ayrshire cow producing 269, 282 1-2, and 274 1-2 lbs. of butter for three successive years, and of another cow giving 399 1-2 lbs. in ten months. Fifteen pounds of butter per week is not unusual in Scotland.

At the British Dairy Show in 1879, twelve samples of milk were tested, representing seven different breeds and three crosses—one Ayrshire, three Jerseys, one Guernsey, one Kerry, one Dexter, one Brittany, and two Dutch cows. Highest on the list ranked the Ayrshire, showing least water and most fat, followed in turn by the three Jerseys and the others in the order named above. The Ayrshire gave 5 1-2 per cent. butter fat, and Dutch cows only 2 1-4 to 2 1-2 per cent. butter fat. At the same show, in 1880, an Ayrshire, in competition with eighteen other cows of noted breeds, yielded 25 lbs. 2 oz. of milk and in pure butter fat 6.82 per cent., and was only beaten by a Jersey with 7.78 per cent. which, however, only yielded for the day 16 lbs. milk.

The pure-bred Ayrshire cow, Duchess of Smithfield 4256, weight 1,128 lbs., has a certified record of 19 lbs. 6 oz. of butter in seven days, and yielded 74 lbs. of milk in one day, in seven days 463.3-4, and 10,748 lbs. in one

year. This is a remarkably good record for any cow of any breed.

In January, 1891, Mr. L. S. Drew, Burlington, Vermont, sent to the Vermont Experiment Station, samples of milk from fourteen cows, and the amount of butter fat shown by analysis ranged from 3.50 to 5.65,—all but five being above 4 per cent.

Last fall, in response to a premium of \$60, offered by the Vermont Experiment Station, in connection with the Champlain Valley Association, Dolly Athol 4th, 6358, owned by Mr. Drew, won first premium, making a record of 31 lbs. milk, containing 2 lbs. 1 1-10 oz. of butter fat, as tested by chemical analysis, or 1 lb. of butter to less than 15 1-2 lbs. of milk, which is said to be the highest record ever made in this country on a public Fair ground. The feed was dry hay and eight quarts wheat bran.

Prof. Whitcher, of the N. H. Experiment Station, reports some interesting experiments in the comparative merits of the Durham, Holstein, Ayrshire and Jersey breeds. Four cows of each breed were taken.

	Lbs. milk.	Lbs. butter.	Butter fat.	Cost of keep.	Lbs. of milk to 1 lb. butter.
The 4 Durhams average,	6141	261	3.86	\$48.41	24
4 Holsteins	"	5971	207	3.13	50.12
4 Ayrshires	"	5845	267	4.28	44.48
4 Jerseys	"	4847	269½	5.12	46.49
					18

In the cost of butter per pound, an Ayrshire was lowest with 9.9 cents per lb. and a Holstein highest with 23.7 cents. In the report of the New Jersey Experiment Station, experimenting for most of the time with three cows of each of the following breeds, the average cost of food per quart of milk was,—Ayrshire, 1.66 cents; Guernsey, 1.71; Holstein Freisian, 1.75; Jersey, 1.91; Shorthorn, 1.71.

The preceding figures tend to show that there are at least individual Ayrshire cows which are not lacking in butter qualities, and that they will make a pound of

butter or a quart of milk at a lower price than any other breed.

#### SOME MILK YIELDS.

The cow, Alice Douglas 4398, in a seven days' test, gave 407 lbs. 12 oz. milk and as high as 62 lbs. 14 oz. in one day, and in the year 12,008 lbs. Roxanna 1816, yielded in twelve years 36 tons of milk, average 3 tons a year; weight of cow, 1,000 lbs. Yields of 7,000 up to 10,000 lbs. are not uncommon, and yields of 13,000 have been recorded.

In 1886, the Ayrshire Breeders' Association offered three prizes for the best herds of six cows yielding the largest amount of milk.

Hayes & Son, N. H., won the 1st prize, with an average of 7,702 1-12 lbs. in twelve months.

Mr. Fletcher, of Mass., took 2nd prize, with an average of 7,323 lbs.; and Mr. Winslow, of Vt., 3rd prize, the average being 7,226 lbs.

In a milking contest at Bristol, Eng., 1887, under the direction of Dr. Voelker, an Ayrshire won, with 105.98 points over four competitors, one of which was a Guernsey.

Some comparative statements come to hand from Canada, at Ottawa, in 1888, in the milch cow competition between Ayrshires, Jerseys, Shorthorns, and Grades; the Ayrshires won 1st, and at Quebec, an Ayrshire cow scored 98.95 and took 2nd and 3rd prizes, while the Jersey that took 1st scored but a trifle more.

Ayrshire milk is rich in all the qualities which constitute good milk, butter, and casein, and the cream or fatty part is in such form—that it remains for a long time diffused through the whole mass, and for this reason, to get the largest amount of cream and butter, requires to be set at least thirty-six hours to get the best results. This quality of holding its cream suspended in the mass makes it particularly a good milk for sending to a distant market. Col. Curtis, of N. Y., one of

our dairy authorities, in an essay on the "Universal Cow," says: "The milk of the Ayrshire is peculiarly adapted to the wants of young children, especially of infants," and he has demonstrated this in his own family. "Jersey milk produced colic and other derangements, which ceased as soon as the diet was changed to Ayrshire. . . . We had the same trouble once with a Jersey calf which was sucking its mother, and it would have died had it not been changed to an Ayrshire cow which proved to be an effectual remedy." The globules of fat in the Ayrshire milk are intermediate in size between the Holstein and the Jersey.

So much for dairy qualities. I will now speak of a quality which is of the least importance in dairy cattle, but which counts for something in the consideration of all the good points of a breed. The claim is made and not without proof, that the Ayrshire will make better beef than any other dairy breed, and has a greater aptitude to fatten quickly. Gilbert Murray, in the "Cattle of Great Britain," published in 1875, says: "The most desirable quality of dairy cows of any breed is that they should yield a large quantity of milk in proportion to the food consumed; and that when dry they should feed quickly." This we claim that the Ayrshire will do to a greater degree than any other dairy breed. Two Ayrshire oxen gained the 1st and 2d prizes a few years ago at the Highland Society Show in Scotland as best fat animals.

Dr. Sturtevant writes, "In the Ayrshire, the fat is mixed with the lean, evenly and in thin streaks. When fed for the butcher, then all her energies are directed to meet his demands,—the food that has hitherto gone to milk being directed to equalization of flesh over the whole animal."

It would be idle talk to say that the Ayrshire is an animal without defects. It is true that the Ayrshire approaches perfection, but there is no breed in the

world absolutely perfect. If there were there would be no room for improvement ; one of the greatest pleasures and encouragements in breeding is to see improvements.

One of the most common faults found with the Ayrshire cow is that the teats are too small, and the accusation is in some cases true. The Scotch standard length of teat has been two to two and one-half inches, and in Scotland, where the women do the milking, this length does not materially prevent the proper drawing of the milk ; but in this country, where a dairy maid is rarely seen, length of teat is of considerable importance. We want teats at least three inches long. Many breeders in the United States have devoted their attention to the remedy of this defect and they have succeeded so that, at the present time, comparatively few cows are found lacking in this respect.

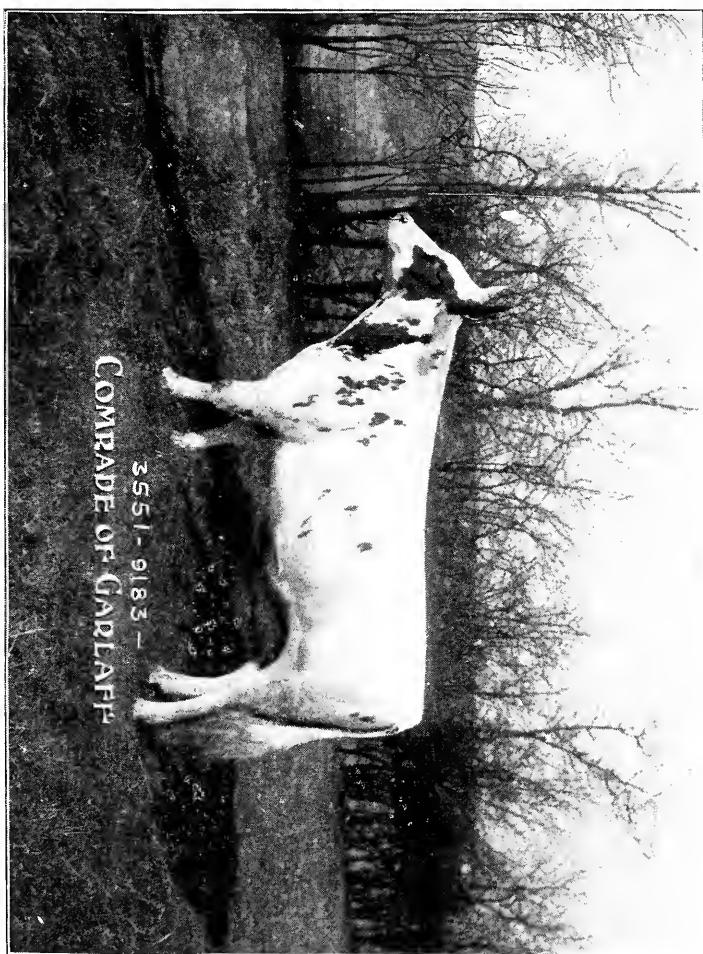
It is sometimes said the Ayrshire is a nervous, irritable animal, and this is sometimes true of individuals ; but the degree of irritability is largely owing to treatment. Dr. Sturtevant says, "The Ayrshire has a superabundance of nerves. She is ready to employ them upon demand, in self-defense, or in self-support ; she asks little beyond a fair chance ; yet all this nature in her is in reserve, and she does not use it wantonly to disqualify her to be the pet of the household. She can the more aptly accommodate herself to circumstances and make them friendly to her."

#### TO SUM UP THE CLAIMS OF THE AYRSHIRE COW.

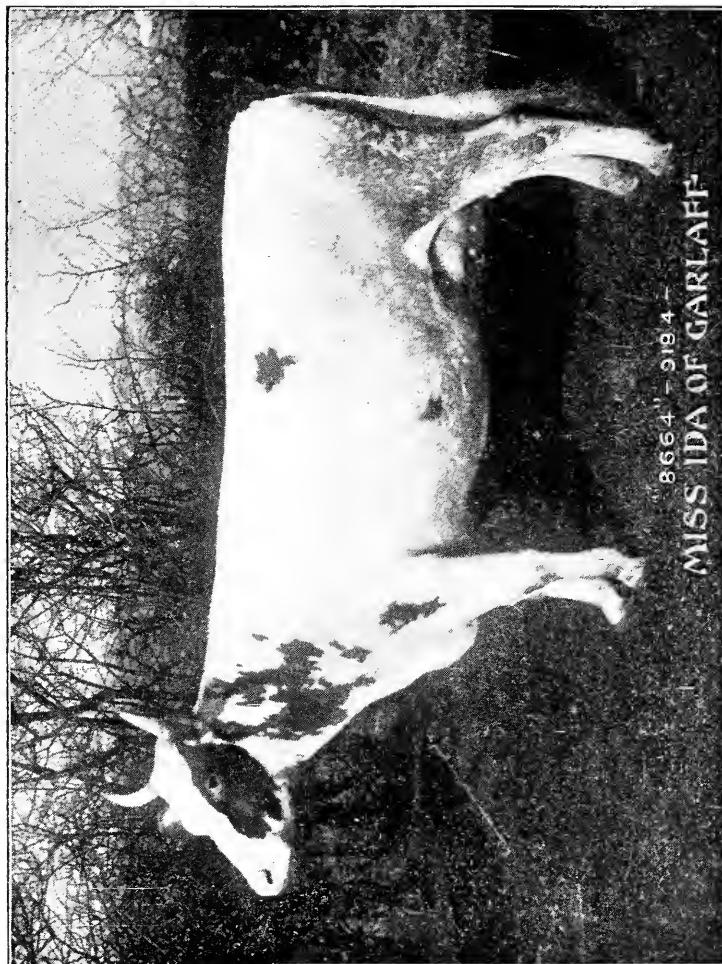
1st. She comes from a country similar in many respects to our own New England, where she has been bred for more than a hundred years for milk and butter, and where she has gained a high reputation in producing these.

2d. In proportion to the amount of food consumed, she will produce as much, if not more, milk or beef, and in many cases as much butter, as any dairy breed.

3d. She is particularly well adapted to the average farms of New England, because she will thrive



IMPORTED FROM SCOTLAND INTO CANADA IN 1898.



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MISS IDA OF GARLAFF

IMPORTED FROM SCOTLAND INTO CANADA IN 1898.

where any cow can live, will quickly respond to good feed and good treatment, is an economical feeder and a large producer, in fact is a profitable cow to keep.

4th. Besides the butter and cheese qualities of her milk, it has remarkable qualities for the market, and is easily digested by children and invalids.

5th. Because the ideal dairy cow as illustrated in the past and present history of the breed, in the symmetrical form and quality of body, in the digestive organs and all the vital functions of life, in the almost perfect shape of udder and in its products (no greater praise can be given a cow than to say she has an Ayrshire udder), and in the general freedom from disease, may be found in the Ayrshire breed.

In conclusion, the art of breeding consists quite as much in correcting defects as in improving or increasing virtues or good points.

Lord Somerville, speaking of what breeders have done for sheep, says; "It would seem as if they had chalked out upon a wall a form perfect in itself, and then had given it existence."

Darwin relates that, "In Saxony, the importance of the principle of selection in regard to Merino sheep is so fully recognized that men follow it as a trade; the sheep are placed on a table and are studied, like a picture by a connoisseur."

To be a successful breeder, you must have an ideal form and qualities in mind, and then by careful and patient study of your animals breed up to that standard as nearly as possible.

(Substance of a paper read before the Senior Class of the Massachusetts Agricultural College at Amherst in 1891.)

## THE AYRSHIRE COW.

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BY C. M. WINSLOW.

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I frequently receive letters of inquiry in regard to the Ayrshire as a dairy cow, desiring information about her ability to produce milk for the city trade, and sometimes inquiring about her butter capacity. Questions are often asked about her hardiness, and what may be expected from a cross of Ayrshire Bulls and Jersey and Guernsey cows, and various other inquiries in a general way.

I will try in the following article to answer the various questions asked, in regard to what kind of a cow the Ayrshire, both pure bred and graded, is.

The Ayrshire breed of cattle originated in Scotland in the County of Ayr, about one hundred and fifty years ago. The history of what cattle or what breeds of cattle were used as the foundation of the Ayrshire is not clear, but the most reliable authority strongly indicates a cross of the old Durham, or Teeswater as it was then called, on the native cows of the country.

Whatever may have been the cross or crosses used to produce the Ayrshire cow, it must have been a happy one and have commended itself to the dairymen of that time for she began to be the popular dairy cow of those days and that country, and still holds the first position at home as a dairy cow and has been transplanted to other parts of Europe, Canada and the United States, taking with her and retaining the home reputation of being a profitable dairy cow under all conditions and in all climates.

She was brought into Canada in the early part of the present century by the Scotch settlers and later into New England and the Eastern States, and has been bred in her purity from these early foundations, subject

to such departures from the original type as her surroundings and the needs of her owners would naturally produce, but all the time retaining the characteristic type of the breed. There is a greater similarity between the Scotch and Canadian Ayrshires than between the Ayrshires of the States and either the Canadian or Scotch, due in a great measure to the more frequent importations into Canada and to the difference in the milkers.

In Scotland and Canada the milkers are mostly women, and their method of milking is to use the thumb and fore finger and to milk by stripping, while in the States men do the milking and prefer a cow with large, long teats that they can grasp. This has led the breeders of Ayrshires in the States to reject the cow with short teats and breed from the cow with long teats. Also the Scotch and Canadian breeder have appeared to place more importance in the exterior form of the Ayrshire, while dairymen from the States have cared more for dairy quality and less for the fashionable type, so that today there is a marked difference between the majority of the Ayrshires as seen in the States and in Canada or Scotland, the cows from the States being, as a rule, larger and more angular, larger udders, not so square and symmetrical, longer and larger teats, larger milk veins and milk holes, thinner hides and larger milkers, the Scotch and Canadian bred Ayrshires, on the other hand, being more blocky, straighter on the back, thicker hided, shorter teats, smaller milk veins and holes, and yet the scale of points of all is the same for a perfect cow, the difference in the animals being due to environment and taste. But where the breeder has been guided by the scale of points in the selection of his breeding animals and has tried to combine utility with the perfect type there is not so much difference between the animals of the States, Scotland and Canada.

The perfect type of the Ayrshire cow requires a small bony head, large full eyes, broad muzzle, large

mouth, fine upright horns, long slim neck, sharp shoulders, straight back from head to tail, ribs well sprung, thick through the lungs, deep in the flanks, heavy hind quarters giving her a wedge shape, broad hips, legs spread well apart, large udder hung well up behind and running forward nearly to the navel, nearly level on the sole, with teats from two and one-half to three inches in length, equal in thickness and placed wide apart, large milk veins ending in large milk holes well towards the fore legs, long slim tail, short bony legs, mellow skin, color may be any combination of red, brown or white except a roan. The cow at maturity should weigh about one thousand pounds. She is of a quiet and pleasant disposition, great intelligence, quick to learn and of a retentive memory ; is easily taught to take the same place in the stable, is not disturbed by noise in the stable at milking time, and does not seem to be particular who milks her, giving her milk as ready to one milker as another. She is a tough and hardy cow, with a strong, vigorous constitution, and rarely has any udder trouble. She is a hearty eater and not at all dainty in her appetite, and seems so hungry always that everything tastes good. She is always eating or chewing her cud, keeping up the latter even when walking along the road, and sometimes when started into a run, seeming to feel that she cannot afford to lose any time. She is a persistent milker, giving a large flow up to nearly time for calving, and unless care is exercised will not readily dry off.

#### MILK.

More attention has been paid to developing the milking quality of the Ayrshire cow than in any other direction and she stands pre-eminently at the head as an economical producer of milk of high quality. Repeated tests at the Vermont Experiment Station have shown her as producing 4 per cent. milk at the least cost of any of their herd, being a fraction over one cent

a quart at Eastern market prices for food consumed.

An average Ayrshire cow will, on fair keep, produce about 3000 quarts of milk in a year, and we have whole herds whose average yearly yield is over 3500 quarts, while many single yields have gone from 4000 to over 6000 quarts of 4 per cent. milk in a year.

Her milk is admirably adapted to family use and the city retail trade, as it will bear transportation without separation of the butter, has a good color and is the most evenly balanced milk of any, in quantity of casein and butter fat, which makes it a most nourishing food easily digested and a perfect food for children and invalids.

The following official test made at Brantford, Ont., between an equal number of Ayrshire and Jersey cows is a good illustration of the food value of the Ayrshire milk as compared with the Jersey. Notice that while the Jersey is higher than the Ayrshire in butter fat it is lower in solids not fat, also in total solids, so that while the Jersey would give a thicker cream or make more butter, it is not as rich in casein, and not as nutritious as a food. It is a settled fact that fat has no nutritive value, also that milk containing an excess of fat is more indigestible and causes serious disorders in the digestive organs of children and young calves.

Breed.	Lbs. solids not fat.	Lbs. fat.	Total solids.
4 Ayrshires,	21.608	8.847	30.455
4 Jerseys,	19.725	10.680	30.405

Another advantage in Ayrshire milk as a commercial product is that the cream rises slowly and of such consistency as will enable it to remingle with the milk when poured back and forth a few times from one can to another, and when so prepared will not again rise readily to the surface, thereby making it a desirable milk to peddle and to use on the table, it having a rich look even to the last that is used.

The following official tests of herds of ten cows each, show a good quantity of milk of high quality.

The herd of Geo. H. Yeaton, Dover, N. H., tested for the Home Dairy Test by the New Hampshire Experiment Station, gave a yield for ten cows, for two days in June and two days in December of 1257 lbs. of milk, nearly 51 lbs. of butter fat, with a percentage of 4.12 butter fat, and 13.04 total solids.

The herd of C. M. Winslow & Son, Brandon, Vt., tested by the Vermont State Experiment Station gave for ten cows in the Home Dairy Test, 1046 lbs. of milk, 42 lbs. butter fat, with a percentage of 4.12 butter fat, and 12.89 total solids.

#### AYRSHIRE MILK RECORDS.

The following are yields of milk that have been reported for 9,000 lbs. and over for 365 consecutive days.

Name.	No. A. R.	Pounds of Milk.
Olah,	11471	9020
Belle Hebron,	13013	9084
Rose Sultana,	12072	9172
Roxie,	4498	9191
Xoa,	11469	9232
Rose Deruth,	10346	9253
Lady Teazel,	6579	9268
Rose Alta,	9529	9307
Betty Lightfoot,	7498	9394
Yucca,	11470	9496
Annie Eert,	9670	9613
Belle Temple,	3353	9624
Roxanna 5th,	4606	9671
Queen of Ayr,	1776	9775
Island Belle,	1292	9982
Biona,	12383	10024
Vinewood Queen,	8092	10026
Ethel Douglas 2d,	2342	10066
Rose Electa,	10336	10207
Ruth,	4816	10219
Rose Eola,	8510	10323
Queen of Ayr 4th,	4465	10426
Nellie Clyde,	12723	10507
Rose Deross,	10347	10645
Duchess of Smithfield,	4256	10748
Queen of Ayr 5th,	4466	10801
Ellen,	8324	10823
Queen Mary,	6578	11154
Meewe,	11130	11252
Lady Murcia,	11111	11543
Mvra,	2955	11908
Manton Queen 4th,	6100	12162
Rena Myrtle,	9530	12172
Lady Fox,	9669	12299
Alice Douglas,	4398	12617

## BUTTER.

Although the Ayrshire cow has usually been considered as strictly a milk producing cow, and although her friends have never put her forward as a special butter producer, yet recent tests of her butter quality, both official and private, seem to indicate that she might, with good reason, aspire to the position of a most profitable butter cow, as well as the most profitable milk cow of any of the dairy breeds, especially when her hardy constitution, easy keeping quality and large dairy production are taken into consideration.

Before the advent of the separator, there was an objection to the Ayrshire cow as a butter-producer, because the separation of cream was slow, taking thirty-six to forty-eight hours to obtain a complete separation, and her large quantity of milk made it cumbersome, and the two taken together made it necessary for the butter-maker to have large accommodations to produce the same quantity cow for cow.

It is a settled fact that the separator takes the cream from the milk of one breed as easily and thoroughly as another, which removes the only objection to the Ayrshire cow as a butter cow, and allows her to compete on a par with others in actual quantity of butter produced, and in economy of production. These changed conditions have led the friends of the Ayrshire cow to test her butter qualities ; and while the majority of the owners of Ayrshire cows make no tests, and know nothing of the individual merits of their herds, a few are taking pains to learn the quality of their cows. The following are tests that have come to my knowledge of recent performances ;

Lady Fox has given 624 lbs. of butter during the year as determined by the Babcock test from periodical tests during the year. She was kept farrow for a while, and the above was for the best 365 days of her milking period. Her yield of milk was 12,299 lbs.

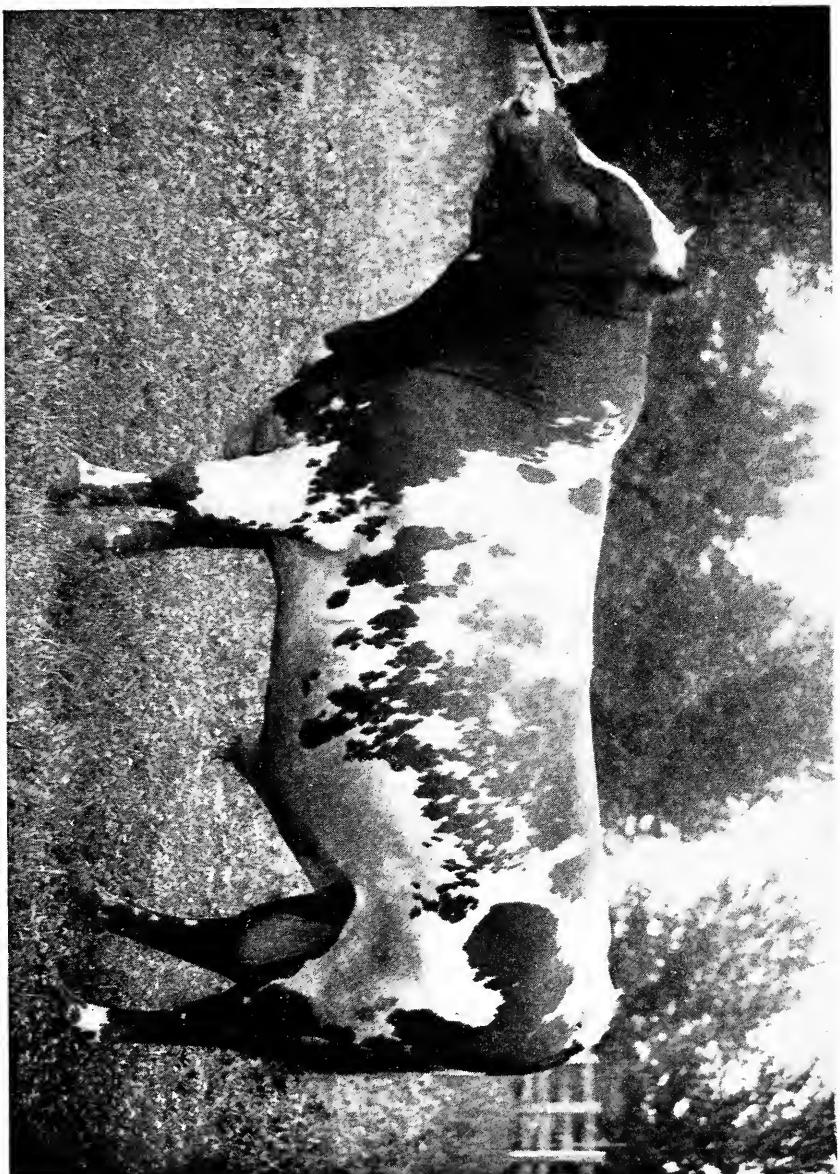
Rose Erica, a heifer not quite two years old when dropping her first calf, has given for the first 365 days of her milking 8864 lbs. of milk and 504 lbs. of butter. The percentage of butter-fat was 4.74, as determined by three composite samples taken and made by an agent from the State Experiment Station in December, 1896, June and September, 1897.

At the Vermont Experiment Station in 1895, Rena Myrtle, 9530, gave 12,172 lbs. of milk and 546 lbs. of butter, which was the largest milk or butter yield ever obtained by the station from any cow of any breed, and she was not fed for the purpose of obtaining the largest dairy yield but was used to test different kinds of foods to see what effect they would have on a cow.

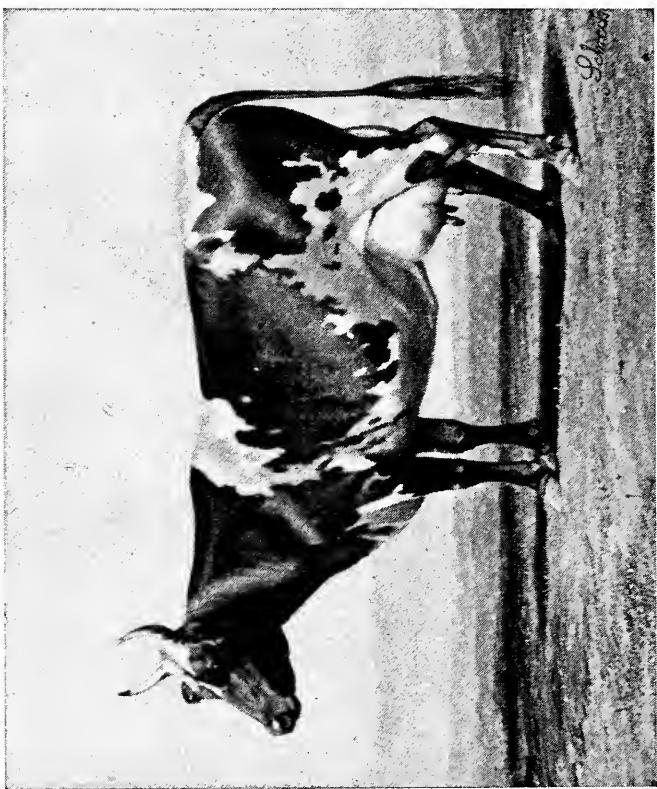
The following butter records for a week, month and year are mostly private records, but from what is known of the conditions surrounding the test are believed to be substantially correct.

There is a long list of records of over 300 lbs., but we have given only those reported as 400 or over.

Name.	No.	Butter.
Quess 2nd,	3120	14.6 in seven days.
Bessie Belle 3rd,	4323	15.4     "     "
Tempie,	3263	15.6     "     "
Juniper 4th,	4578	17.11     "     "
Duchess of Smithfield,	4256	19.6     "     "
Rose Cleon,	11143	49.8 in Jan., 1897.
Rose Electa,	10336	57.8     "     "
Rose Sultana,	12072	64.0     "     "
Rose Ladye,	11158	78.4     "     "
Queen Selga,	9545	404 in one year.
Rose Veritas,	12076	404     "     "
Rose Allie,	11154	405     "     "
Acelista,	12094	406     "     "
Olah,	11471	412     "     "
Nancy B 2nd,	11936	412     "     "
Biona,	12383	413     "     "
Nancy B,	9581	416     "     "
Annie Bert,	9670	417     "     "
Printsteps 2nd,	8410	418     "     "
Mexic,	11131	419     "     "



SIR THOMAS BRUCE. 4161.



LADY ESSEX 3D. 3595.

Rose Alta,	9529	420	"	"
Rose Sultana,	12072	421	"	"
Xoa,	11469	423	"	"
Minnehaha 3rd,	12646	424	"	"
Ruth,	4816	425	"	"
Clio Rose,	7525	441	"	"
Yucca,	11470	444	"	"
Lovely,	9596	448	"	"
Rose Ladye,	11158	463	"	"
Rose Electa,	10336	467	"	"
Iola Lorne,	12773	474	"	"
Rose Erica,	12775	504	"	"
Rena Myrtle,	9530	546	"	"
Mee wee,	11130	567	"	"
Rose Deross,	10347	572	"	"
Rose Clenna,	11153	607	"	"
Lady Fox,	9669	624	"	"

I have received the following comparisons between the twelve best Jersey cows of the Vermont Experiment Station and the twelve best Ayrshire cows from the herd of Mr. Drew of Burlington, Vt.

#### EXPERIMENT STATION JERSEYS.

Average of 12 best cows, 6377 lbs. of milk, 361 lbs. of butter.

#### L. S. DREW'S AYRSHIRES.

Average of 12 best cows, 7515 lbs. of milk, 355 lbs. of butter.

At the Vermont State Fair in the fall of 1897, the average of the 12 Ayrshire cows in the butter fat test was 4.99 per cent.

At the New Hampshire Experiment Station, with four cows of each breed, the average results for a full year's test was as follows:

	Ayrshire.	Jersey.	Holstein.
Pounds of milk,	5,845	4,847	5,971
Pounds of butter,	267	269½	207
Per cent. of butter fat,	4.28	5.12	3.15
Cost of keeping,	\$44.48	\$46.49	\$50.12
Pounds of milk to pounds of butter,	21½	18	29

Judging from the above, it would seem as though a little care in selection and breeding would in a very

short time place the Ayrshire cow in the front as a butter producer. It shows there is an inherent butter capacity in the Ayrshire that is simply wonderful, for nothing has ever been done to develop the butter trait, and still, when placed side by side with the butter-bred cow, she equals if not excels her on her own ground.

#### CHEESE.

As a cheese cow, the Ayrshire has always taken a high position, giving from 600 to 1,200 pounds of cheese in a year.

The average production of cheese in Scotland is from 500 to 600 pounds per cow. The famous Dunlop cheese of Ayrshire, Scotland, is probably made largely from Ayrshire cows' milk.

#### BEEF.

The Ayrshire being strictly a dairy cow, no attempt has ever been made to develop her beef qualities, but as a beef cow she will any time pay her original cost, as she fattens quickly, has very heavy hind quarters, and is thick on the loin, with her meat nicely flecked and of a rich color.

I have been informed that the steers both pure bred and grades make fine steers, being quick growers, easily fattened and the meat properly placed, to cut up to advantage, also, that it is of an attractive color and nicely flecked. As oxen they are equal to the Devon in intelligence and sprightliness, only somewhat larger.

#### THE BULL AS A TOP-CROSS.

Frequent inquiry is made your Secretary in regard to the top-cross on Jerseys and what thoroughbred is the best for the purpose of strengthening the constitution of the Jersey and making her a more profitable dairy cow for the common farmer. The judicious crossing of different thoroughbreds is a nice point in breeding, and requires a good deal of theoretical knowledge, united

with actual practice, for all breeds do not nick well when crossed one with the other.

That the Jersey needs some cross of strong blood seems to be the general opinion of her owners, and various experiments have been made with bulls of various breeds, but so far as I am able to learn no cross gives such satisfactory results as the Ayrshire bull on the Jersey cow.

The most public trial of crossing on the Jerseys has been that on the farm of the late Theodore Havemeyer with the Normandy. I have never seen the result, but it would seem contrary to all natural law and not likely to produce stock excelling in any point. The Normandy is a large, coarse, ungainly animal, with an ill-shaped udder, thick, heavy hide, and as far as I have known is a very ordinary milker, and would not seem to have any desirable points to give the Jersey, except size, and the difference in size is too great for a first cross, for it is an acknowledged fact that variation by crossing must be done by a slow and gradual series of crosses. The Holstein has been tried on the Jersey but there are objections to this breed, both from the disparagement in size and lack of constitution and hardiness in the Holstein.

The Ayrshire seems to possess, in an eminent degree, all the points lacking in the Jersey, and to be of about the right size to nick well with the Jersey to produce a cross of symmetrical shape.

The two breeds compared are about as follows: The Ayrshire a little larger than the Jersey, of stronger constitution, a better feeder and not so dainty in appetite. Both are strictly dairy breeds, and when the average yield of dairy product is compared, cow for cow, the Ayrshire gives about the same quantity of butter in considerably more milk, and, when reckoned on a money basis, the Ayrshire is found to yield the larger return in dollars.

There are probably more individual Jerseys that have established records of butter than of Ayrshires, be-

cause the Jersey breeders have for years been testing their cows, while the testing of Ayrshire cows for butter is of very recent date, and only a few breeders have done so.

There have been a few crosses made of Ayrshire bulls on Jersey cows, and so far the result has proved satisfactory in producing a fair-sized dairy cow of strong constitution and large dairy capacity.

It is claimed by some of those who have tried the cross that they give as rich milk as the Jerseys, and in an increased quantity, and by all, so far as heard from, that they get larger returns than from the full-blood Jersey.

The result of crossing on the Guernsey is similar to that on the Jersey with perhaps a little larger animal, there being no material difference between the Guernsey and Jersey, except that the Guernsey is larger, quieter, and gives yellower milk.

I have been inquired of in regard to the Ayrshire as a top cross on Holstein cows, but having never seen it tried I am uncertain what the result would be, but it is my opinion that while it would be an improvement on the Holstein, it would not produce a very valuable cow, the Holstein being herself a thoroughbred, and at the same time having so many undesirable qualities, being a very hard keeper, a lean milker and tender of constitution, and as a beef animal having blue meat poorly flecked.

The cross on Shorthorn cows gives a very desirable general purpose cow, being good size, easily kept, good milkers and good butter cows. In short, the two breeds seem to blend their good qualities in producing a typical dairy cow.

On the Native with its multitude of crosses, the Ayrshire bull seems to nick well and produces a good market cow that usually resembles the Ayrshire and is well spoken of by her owner.

The Ayrshire as a pure bred and grade is popular in the city cow market, being eagerly sought by the

milkman and classed as fancy cows, bringing the top price of the market.

The Ayrshire has never been boomed for popular favor, but has always held all the territory she has acquired, and slowly and surely invaded new sections. It speaks well for her that she steadily makes new friends, and holds almost all her old ones, for usually a dairyman who tries Ayrshires does not wish to change.

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## CONSTITUTION.

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### PREAMBLE.

We, the undersigned, breeders of Ayrshire Cattle, recognizing the importance of a trustworthy Herd Book that shall be accepted as a final authority in all questions of Pedigree, and desiring to secure the co-operation of all who feel an interest in preserving the purity of this stock, do hereby agree to form an Association for the publication of a Herd Book, and for such other purposes as may be conducive to the interests of Breeders, and adopt the following Constitution:

#### ARTICLE I.

This Association shall be called The Association of Ayrshire Breeders.

#### ARTICLE II.

The members of the Association shall comprise only the original signers of this Constitution, and such other persons as may be admitted, as hereafter provided.

#### ARTICLE III.

The officers of the Association shall consist of a President, four Vice-Presidents, a Treasurer, a Secretary, who, together with six members of the Association, all chosen by ballot, shall constitute an Executive Committee.

The President, Vice-Presidents, Treasurer and Secretary shall be elected annually.

The six members who make up the balance of the Executive Committee shall be elected as follows: Two members for one year; two members for two years, and two members for three years, and hereafter two members shall be elected each year, for a term of three years.

The Treasurer shall present at the annual meeting of the Association a full statement of his accounts, audited by two members of the Association, appointed by the Executive Committee.

The Executive Committee shall, under the general direction of the Association, prescribe the manner in which the business of the Association shall be conducted; shall have general control of all matters pertaining to its interests; shall have authority to appoint an Editor of the Herd Book, and may fill any vacancies occurring among the officers. The office of Secretary, Treasurer and Editor may be filled by the same person.

The Treasurer, Secretary and Editor shall receive compensation for their services, to be fixed by the Association. The Treasurer shall give such bonds as may be required by the Executive Committee.

#### ARTICLE IV.

The annual meeting of the Association shall be held each year, at such time and place as shall be designated by the Executive Committee (of which notice shall be sent to members at least one month previous), for the discussion of questions of interest to the members, and for the election of officers for the ensuing year. Special meetings of the Association may be called by the President or by the Executive Committee or at the written request of ten members. Twenty days' notice must be given and the object of the meeting announced in the call, and no business other than that specified in the call shall be transacted at the special meeting. Time and place shall be determined in same way as annual meeting.

At all meetings of the Association members may vote in person, or by proxy, or they may send their ballots by mail to the Secretary, whose duty it shall be to

vote the same and to acknowledge their receipt. At least twenty members present, represented by proxy, or written ballot, shall be a quorum for transacting business.

#### ARTICLE V.

Only breeders of Ayrshire cattle shall be eligible for membership, and members shall be elected at any regular meeting of the Association; also by the unanimous written consent of the Executive Committee at any time between the annual meetings, subject to the following conditions:

Each applicant for membership shall be recommended by one or more members of the Association, as a trustworthy and careful breeder; and no new member shall be admitted if objected to by any officer of the Association.

The Secretary shall notify the candidate of his rejection, or in case of his election that he will be admitted as a member on signing the Constitution and paying the initiation fee.

An applicant who has been rejected shall not be voted on again until two years from the date of his rejection, unless by the unanimous consent of the officers of the Association.

#### ARTICLE VI.

Each member shall pay an initiation fee of twenty-five dollars. These fees shall constitute an Association Fund to defray the expenses of publishing the Herd Book, and other charges incidental to the organization of the Association and to the transaction of its business.

No officer or member shall be authorized to contract any debt in the name of the Association.

#### ARTICLE VII.

The Herd Book shall be edited by an Editor appointed for that purpose, under the control and supervision of the Executive Committee, and shall be published only with its official approval.

The charge for entry of the Pedigree of each animal belonging to a member of the Association shall be fixed by the Executive Committee, but shall not exceed one dollar, except for an animal two years old.

Animals not belonging to members of the Association may be entered in the Herd Book upon the payment of twice the amount charged to members.

The Herd Book charges shall be appropriated to the examination and verification of Pedigrees, and the preparation of the Herd Book, which shall be published by the Association and shall be its property. The price of the Herd Book shall be determined by the Executive Committee. The Editor shall keep on file all documents constituting his authority for Pedigrees, and shall hold them subject to the inspection of any members of the Association, and shall deliver them to his successor in office.

#### ARTICLE VIII.

Should it occur at any time that any member of the Association shall be charged with willful misrepresentation in regard to any animal, or with any other act derogatory to the standing of the Association, the Executive Committee shall examine into the matter; and if it shall find there is foundation for such a charge, the offending member may be expelled by a vote of two-thirds of the members of the Association, present or represented at any regular meeting.

#### ARTICLE IX.

This Constitution may be altered or amended by a vote of two-thirds of the members present or represented by proxy, at any annual meeting of the Association.

Notice of proposed alterations or amendments shall be given in the call for said meeting.

A SCOTCH LASSIE.





ROSE CLENNAN. 11153.

## REGULATIONS.

1. Only such animals shall be admitted to the Herd Book as are proved to be either imported from Scotland or descended from such imported animals.

2. All animals hereafter imported, to be eligible to registry in the Ayrshire Record, must previously be recorded in the Ayrshire Herd Book of Scotland, and an application for registry must be accompanied by a certificate of registry duly signed by the Secretary in Scotland.

Entries of calves imported in dam must be accompanied by the certificate of registry of sire and dam in the Scotch Herd Book, also certificate of bull service, signed by owner of bull.

3. No animal not already named and entered in some Herd Book at this date, shall be accepted for entry under a name that has already been offered for entry; also, the affix, 1st, 2d and 3d, shall apply only to calves of the cow bearing the name used; not to her grandchildren, nor any other animal.

4. The breeder of an animal shall be considered the one owning the dam at the time of her service by the bull.

5. No Pedigree will be received for entry from anyone except the breeder of the animal offered, unless it is accompanied by a certificate of the breeder, or his legal representative, indorsing the Pedigree.

Entries of calves, sired by bulls not owned by the breeder of the calf, shall be accompanied by a certificate of bull service signed by owner of bull.

6. All animals sold, in order that their progeny may be registered, must have their successive transfers duly recorded. Records of transfers will be made only on the certificate of former owner, or his legal representative.

7. A transfer-book shall be kept by the Editor, in which all changes of ownership shall be recorded.

8. The Editor shall keep a record of the deaths of all animals which may be sent to him. (And breeders are requested to forward the same, stating cause, etc.)

9. The fees for recording are one dollar for each animal recorded by and in the name of a member of the Association, being either bred or owned by him, and two dollars for animals over two years old at the time of entry.

Double the above rates are charged to those not members.

A fee of twenty-five cents will be charged for recording ancestors necessary to complete a pedigree to importation or to cattle already in the Ayrshire Record.

Transfer fee twenty-five cents. All the above fees should accompany the entry or transfer papers to insure attention.

10. An individual membership shall be continued after the death of a member in the settlement of his estate until the same shall be settled and then the membership shall cease. In case of corporations, the corporation may continue as a member so long as they are interested in the Association, and shall be represented by such person as may be designated by the President and Secretary of the Corporation.

11. These Regulations may be altered, amended or added to, with the consent of two-thirds of the officers of the Association and Executive Committee.

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### PRICE OF BOOKS.

Each Vol., I to XII inclusive, postage prepaid, may be obtained of the Treasurer, Henry E. Smith, Enfield, R. I., price,	\$2.25
Milk record blanks, per 100,	1.50
Blanks for registering and transfer blanks, free, on application to Secretary.	

## CHARTER.

### An Act to Incorporate the Ayrshire Breeders' Association.

*It is hereby enacted by the General Assembly of the State of Vermont:*

SEC. 1. J. D. W. French, James F. Converse, Alonzo Libby, F. H. Mason, Obadiah Brown, Henry E. Smith, C. M. Winslow, S. M. Wells, H. R. C. Watson, James Scott, George A. Fletcher, Charles H. Hayes, John Stewart, their associates and successors, are constituted a body corporate by the name of the "Ayrshire Breeders' Association," and by that name may sue and be sued; may acquire by gift or purchase, hold and convey real and personal estate, necessary for the purpose of this corporation, not to exceed twenty-five thousand dollars; may have a common seal and alter the same at pleasure.

SEC. 2. The object of this corporation shall be to publish a herd book, and for such other purposes as may be conducive to the interest of breeders of Ayrshire cattle.

SEC. 3. This corporation may elect officers and make such by-laws, rules and regulations for the management of its business as may be necessary, not inconsistent with the laws of this State.

SEC. 4. This corporation may hold its meetings at such time and place as the corporation may appoint.

SEC. 5. This act shall take effect from its passage.

JOSIAH GROUT,

*Speaker of the House of Representatives.*

LEVI K. FULLER,

*President of the Senate.*

Approved November 23, 1886.

EBENEZER J. ORMSBEE,

(A true copy.) *Governor.*

Attest: E. W. J. HAWKINS,

*Engrossing Clerk.*

## SCALE OF POINTS OF AYRSHIRE BULL.

(ADOPTED FEBRUARY 21, 1889.)

The points desirable in the female are generally so in the male, but must, of course be attended with that masculine character which is inseparable from a strong and vigorous constitution. Even a certain degree of coarseness is admissible ; but then it must be so exclusively of masculine description as never to be discovered in a female of his get.

1.	The head of the bull may be shorter than that of the cow, but the frontal bone should be broad, the muzzle good size, throat nearly free from hanging folds, eyes full. The horns should have an upward turn, with sufficient size at the base to indicate strength of constitution.....	10
2.	Neck of medium length, somewhat arched, and large in the muscles which indicate power and strength.....	10
3.	Forequarters—shoulders close to the body, without any hollow space behind ; chest broad, brisket deep and well developed, but not too large .....	7
4.	Back short and straight ; spine sufficiently defined, but not in the same degree as in the cow ; ribs well sprung, and body deep in the flanks .....	10
5.	Hindquarters—long, broad and straight ; hip bones wide apart ; pelvis long, broad and straight ; tail set on a level with the back ; thighs deep and broad.....	10
6.	Scrotum large, with well developed teats in front.....	7
7.	Legs, short in proportion to size, joints firm. Hind legs well apart, and not to cross in walking .....	5

8. Skin yellow, soft, elastic, and of medium thickness.....	10
9. Color, red of any shade, brown or white, or a mixture of these—each color being distinctly defined.....	3
10. Average live weight at maturity, about 1,500 lbs.....	10
11. General appearance, including style and movement.....	15
12. Escutcheon, large and fine development.....	3
Perfection.....	100

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### SCALE OF POINTS OF AYRSHIRE COW.

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(ADOPTED FEBRUARY 21, 1889.)

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The following scale of points for the Ayrshire cow was adopted—being similar to the scale adopted in Scotland in 1884, and changed in a few points to render them applicable to this country.

1. Head, short; forehead, wide; nose, fine between the muzzle and eyes; muzzle, large; eyes, full and lively; horns, wide set on, inclining upwards .....	10
2. Neck, moderately long, and straight from the head to the top of the shoulder, free from loose skin on the under side, fine at its junction with the head, and enlarging symmetrically towards the shoulders.....	5
3. Forequarters—shoulders, sloping; withers, fine; chest, sufficiently broad and deep to insure constitution; brisket and whole forequarters light, the cow gradually increasing in depth and width backwards .....	5

4.	Back, short and straight ; spine, well defined, especially at the shoulders ; short ribs, arched ; the body deep at the flanks.....	10
5.	Hindquarters, long, broad and straight, hook-bones wide apart, and not overlaid with fat ; thighs, deep and broad ; tail long, slender and set on a level with the back.....	8
6.	Udder, capacious and not fleshy, hind part broad and firmly attached to the body, the sole nearly level and extending well forward; milk-veins about udder and abdomen well developed ; the teats from 2 1-2 to 3 inches in length, equal in thickness—the thickness being in proportion to the length—hanging perpendicularly, their distance apart at the sides should be equal to one-third of the length of the vessel, and across to one-half the breadth.....	30
7.	Legs, short in proportion to size, the bones fine, the joints firm.....	3
8.	Skin, yellow, soft and elastic, and covered with soft, close, woolly hair,.....	5
9.	Color, red of any shade, brown or white, or a mixture of these—each color being distinctly defined.....	3
10.	Average live weight, in full milk, about 1000 pounds.....	8
11.	General appearance, including style and movement.....	10
12.	Escutcheon, large and fine development.....	3
	Perfection.....	100

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